

# **Merrifield Living - Section D- Stage 54, Mickleham**

Level 1 Inspection & Testing Report

Reference: 1120 0428-1



**Prepared for:**

BMD Urban

October 2023

# Document Control Record

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## Document control

<b>Report title</b>		Level 1 Inspection & Testing			
<b>Project reference number</b>		1120 0428-1			
<b>Client</b>		BMD Urban			
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Revision	Date	Descriptions/Status	Author	Reviewer	Approver
0	24/10/2023	First Issue	Y Balkis	A Tan	A Tan

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ENGINEERS  
AUSTRALIA  
Professional Engineer  
MEMBER

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## **Disclaimer**

The findings and conclusions contained in this report are made based on site conditions that existed at the time this work was conducted. The conclusions present in this report are relevant to the conditions of the site and the state of legislation currently enacted as at the date of this report.

Findings and conclusions are made assuming that the soil, groundwater, geological and chemical conditions detailed within this report are accurate and remain applicable to the site at the time of writing. No other warranties are made or intended.

A&Y Associates (A&Y) Pty Ltd has used a degree of skill and care ordinarily exercised by reputable members of our profession practicing in the same or similar locality.

A&Y does not make any representation or warranty that the conclusions in this report will be applicable in the future as there may be changes in the condition of the site, applicable legislation or other factors that would affect the conclusions contained in this report.

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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 Merrifield Living - Section D - Stage 54, Mickleham.

## **2 Project Summary**

It is understood that BMD Urban require the fill platforms within Stage 54 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 **54 working days** from the **29<sup>th</sup> June 2023 to 26<sup>th</sup> September 2023**.

This report is applicable for fill placed by BMD Urban for Merrifield Living - Section D- Stage 54, Mickleham, as shown in Appendix A – Site Plan.

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### **3 Project Specifications**

The supervision and inspections were performed based on AS3798 and the specifications provided in the drawing (ref: "Merrifield Living – Section D – Stage 54"; Project No. 17040-54, Drawing No. EW101 - REV0 by Verve Projects Pty Ltd, Dated 28/04/2023) for the construction works in Merrifield Living - Section D- Stage 54, Mickleham.

A short summary of the requirements outline in AS3798 is provided below:

- 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 dry density ratio of at least 95% Standard, as the project was classified as **Residential**.

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## **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 over eight (8) working days from the 26<sup>th</sup> June 2023 to 2<sup>nd</sup> August 2023, as mentioned in the report 1120 0428-1 (SSI1).

The exposed subgrade material comprised natural silty 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 fill thickness placed is approximately 200-3000mm. The fill layers or thickness nominated in this report are provided as a guide on the amounts of fill placed and do not necessarily reflect an accurate survey of the fill levels.

## **6 Fill Material**

The fill material used for the platform consisted of site derived material. The material was predominantly comprising of Silty Clay.

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## **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).

Tests were performed using a 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 tests per day's production based on the minimum requirements of AS 3798-2007 and taken from each layer of fill placed.

A total of 162 field density tests were performed during the earthworks. All of the test results met the specified compaction requirement of 95% Standard Compaction.

The locations of the 162 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 Finished Surface Levels**

It should be noted that even though the final fill layer meets the specification requirements, over time, the material may be subject to adverse weather conditions resulting in either surface softening or drying and cracking. The top 150mm – 200mm of the fill will deteriorate with time and should be considered by the foundation engineer.

## **9 Exclusion**

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

- Any trenches 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 that may be excavated and filled after the Level 1 supervision conducted by A&Y Associates.
- Uncontrolled fill and topsoil that may have been placed as part of the landscaping of the site following the completion of the engineered fill construction.

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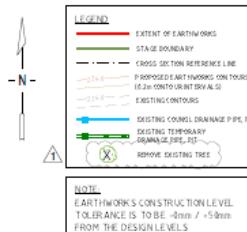
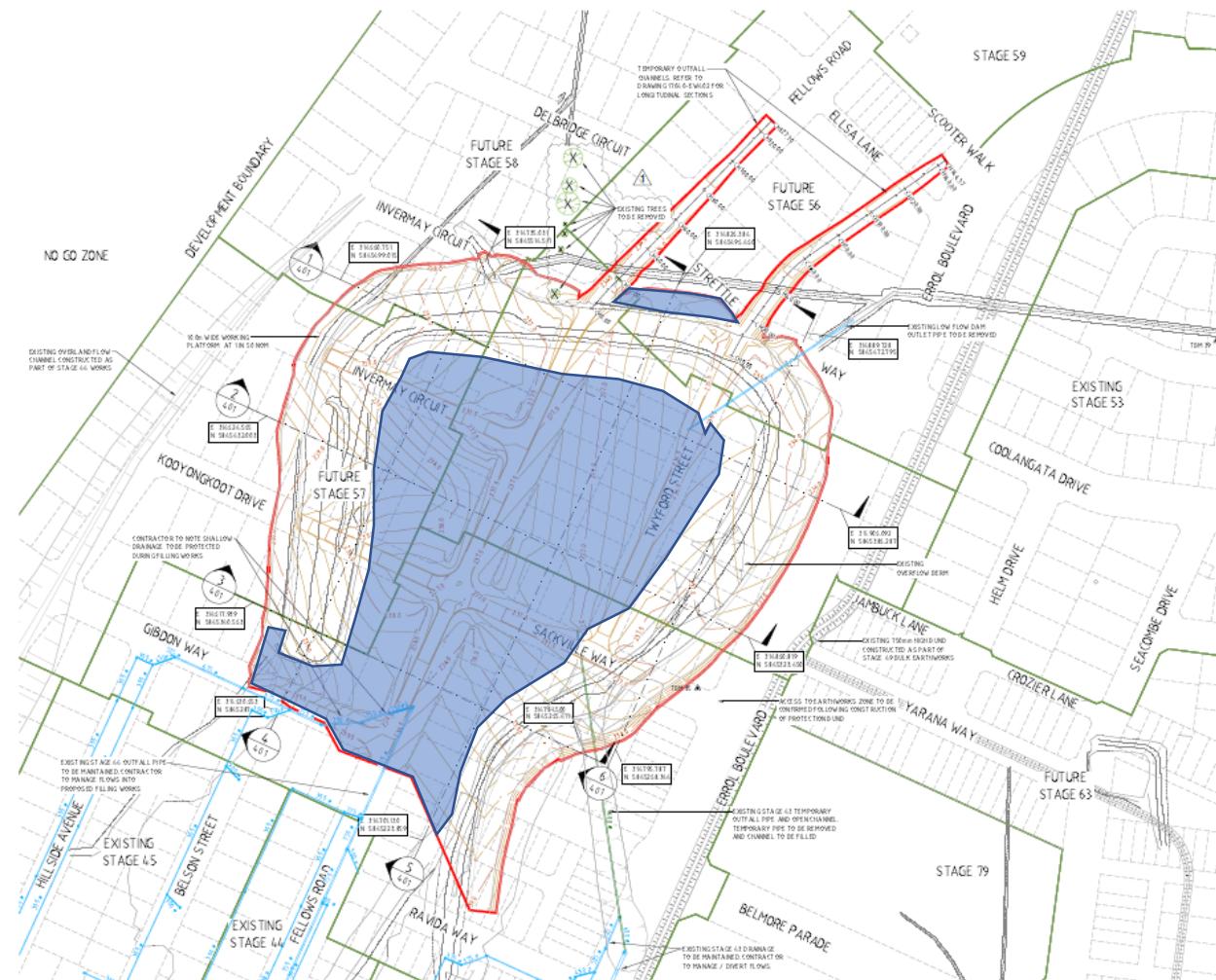
## **10 Conclusion**

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.

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## **Appendix A - Site Plan**

Area Inspected and Tested



- FOR THE EARTHWORKS CONTRACTOR TO REFER TO VERTIS CONTROL AND REFERRED TO THE EARTHWORKS CONTRACTOR PLAN, JUN 2012.
- CONTACT FOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINS AND PITS WITHIN LIMIT OF WORK.
- A NO GO ZONE IS TO BE MAINTAINED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL. FILL TO BE LEVEL. TAKE DEDUCTIVE ADVICE AND SUPERINTENDENTS IN CONSTRUCTION REPORT TO BE PROVIDED.

		J.BARCELLO
	APPROVED:	H1-1000 0 10 20 30 40 50
	BY:	J.BARCELLO
	WITNESS:	LAPAP
1 TREES TO BE REMOVED	LAPAP	E100.23
2 CONSTRUCTION ISSUE	LAPAP	E100.23
REV DESCRIPTION	APPROVED:	G.GROMANZ



HUME CITY COUNCIL  
MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM  
**CONSTRUCTION**  
PROJECT NO: 366 F1 | PROJECT ID: 17040-54 | EW201 | 1

**PROJECT:**  
Merrifield Living – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

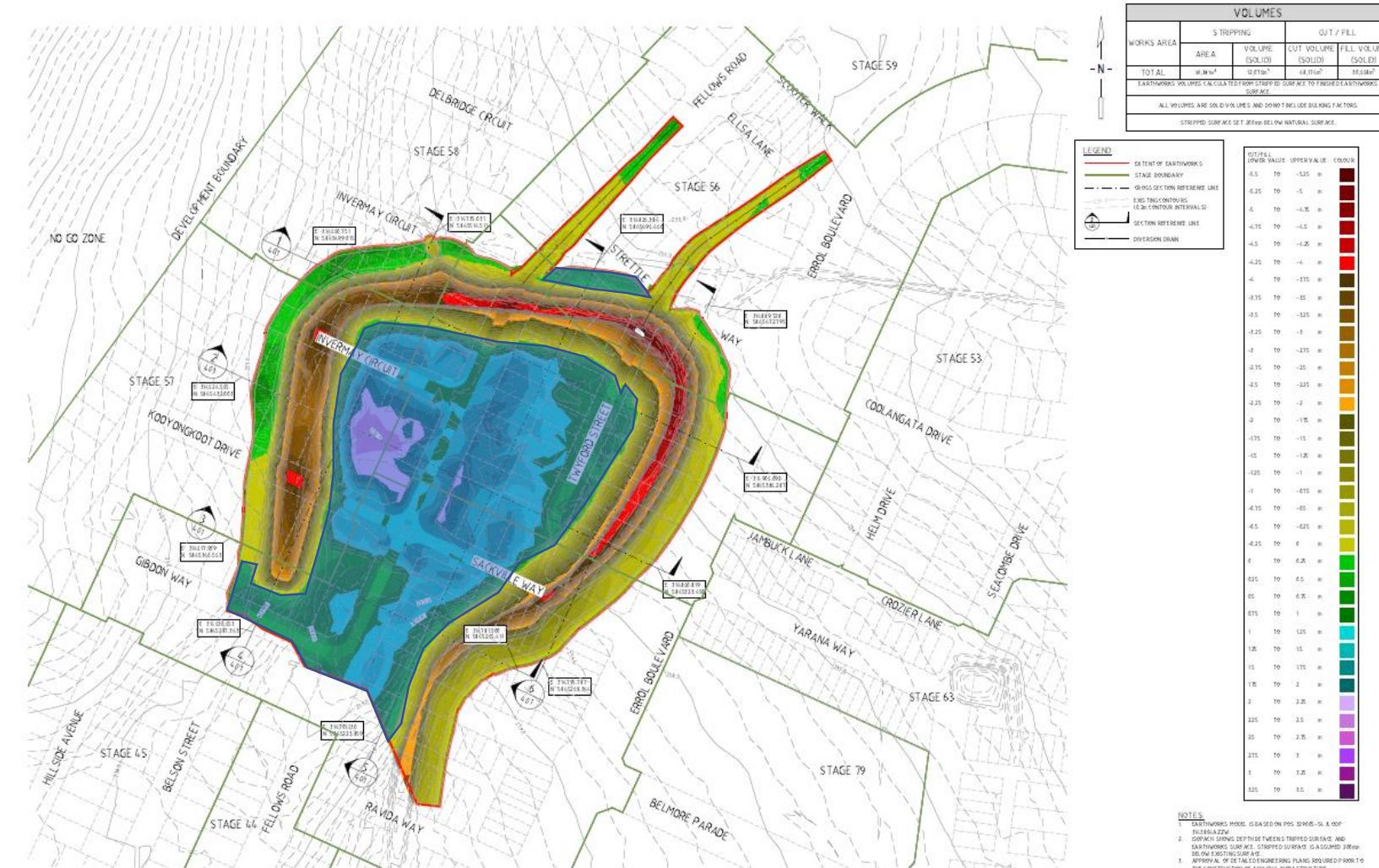
**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1

SITE PLAN SKETCH—NOT TO SCALE



### **Area Inspected and Tested**



HUME CITY COUNCIL		
PROJECT	STAGE	BULK EARTHWORKS ISOPACH PLAN
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		
REF ID:	CONSTRUCTION	PROJECT NO: 366 F1 PROJECT NO: 17040-54 REF ID: EW301 PROJECT NO: 0

**PROJECT:**

**CLIENT:**

**LOCATION:**

**PROJECT No**  
**1120 0428-1**

SITE PLAN SKETCH—NOT TO SCALE



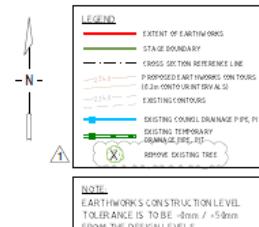
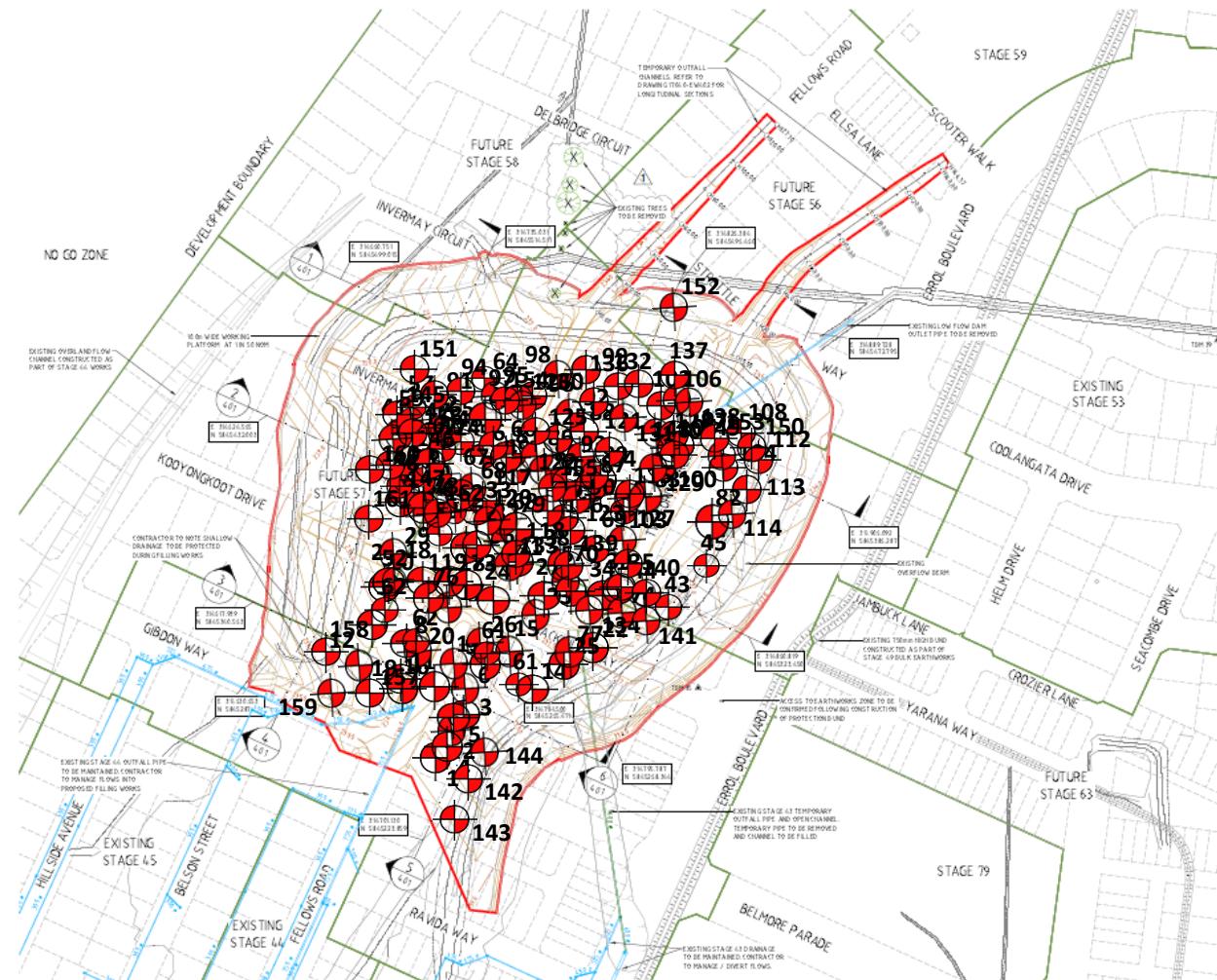
**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

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## **Appendix B – Test Locations**



Indicative Test Location



- NOTES:**
1. FOR THE EARTHWORKS, REFER TO VERTIS CONTROL AND REFERRED TO THE PLANS AS OF 20/01/2012.
  2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINAGE AND PITS WITHIN LIMIT OF WORKS.
  3. ALL EXISTING DRAINS ARE TO BE DUG OUT AND LEVELLED TAKEN BY SURVEYORS PRIOR TO PLACEMENT OF FILL. FILL TO BE LEVEL. TAKE DRAINS AS PER CONTRACTOR'S DESIGN AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

		J.BARCELLO
	APPROVED:	H1-1000 0 10 20 30 40 50 60 70
1. TREES TO BE REMOVED	LAPAP	E100.23
2. CONSTRUCTION ISSUE	LAPAP	E100.23
REV. DESCRIPTION	APPROVED DATE	G.GROMANZ



**verve**  
Ground Floor, 207-213 Waverley Road,  
Mickleham, VIC 3340  
TEL: 03 8373 1300 verveprojects.com  
© Verve Projects Pty Ltd.

HUME CITY COUNCIL  
**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**  
**CONSTRUCTION**  
PROJECT NO. 366 F1 | PROJECT ID 17040-54 | EW201 | 1

**PROJECT:**  
Merrifield Living – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Indicative Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL		RECEIVED
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		BULK EARTHWORKS ISOPACH PLAN
SEARCHED	CONSTRUCTION	INDEXED
	366 F1	17040-54
		EW301
		0

**PROJECT:**

**CLIENT:**

**LOCATION:**

**PROJECT No:**

## **SITE PLAN SKETCH—NOT TO SCALE**



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

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## **Appendix C – Test Results Summary**

Project No		1120 0428-1 (BMD 2923)			Client	BMD Urban				
Project Name		Merrifield Living - Section D - Stage 54 (Level 1)			Specification			Density Ratio ≥ 95% of Peak Wet Density		
Location		Mickleham								
Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest
#	#		Lot #	#	%	%	%	%		Pass / Fail
1	-	29/06/2023	-	1	0.0	97.0	109.0	2.0	Pass	-
2	-	29/06/2023	-	1	0.0	98.5	99.0	-0.5	Pass	-
3	-	29/06/2023	-	1	0.0	98.0	108.0	1.5	Pass	-
4	-	30/06/2023	-	2	0.0	96.0	97.5	-0.5	Pass	-
5	-	30/06/2023	-	2	0.0	97.0	108.0	1.5	Pass	-
6	-	30/06/2023	-	2	0.0	97.0	109.5	2.0	Pass	-
7	-	3/07/2023	-	3	0.0	97.0	96.5	-0.5	Pass	-
8	-	3/07/2023	-	3	0.0	96.5	97.5	-1.0	Pass	-
9	-	3/07/2023	-	4	0.0	96.5	99.0	0.0	Pass	-
10	-	4/07/2023	-	4	4.1	96.5	109.5	2.0	Pass	-
11	-	4/07/2023	-	5	3.2	98.0	110.0	2.0	Pass	-
12	-	4/07/2023	-	6	2.4	98.0	98.0	-0.5	Pass	-
13	-	5/07/2023	-	5	3.6	96.0	99.0	-0.5	Pass	-
14	-	5/07/2023	-	5	3.9	96.0	106.5	1.5	Pass	-
15	-	5/07/2023	-	5	4.5	96.0	99.0	-0.5	Pass	-
16	-	6/07/2023	-	6	5.4	96.0	99.0	0.0	Pass	-
17	-	6/07/2023	-	6	2.9	95.5	98.0	-0.5	Pass	-
18	-	6/07/2023	-	7	4.1	95.5	98.0	-0.5	Pass	-
19	-	7/07/2023	-	8	4.3	95.5	96.0	-1.0	Pass	-
20	-	7/07/2023	-	8	3.6	96.5	106.5	1.5	Pass	-
21	-	7/07/2023	-	8	5.6	95.5	107.5	1.5	Pass	-
22	-	8/07/2023	-	1	0.0	96.5	97.0	-1.0	Pass	-
23	-	8/07/2023	-	1	5.2	96.5	98.5	-0.5	Pass	-
24	-	8/07/2023	-	1	0.0	96.5	99.0	-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)

25	-	10/07/2023	-	4	3.1	95.0	106.0	1.5	Pass	-
26	-	10/07/2023	-	5	2.7	97.0	107.5	2.0	Pass	-
27	-	10/07/2023	-	2	3.5	95.0	107.0	1.5	Pass	-
28	-	11/07/2023	-	3	0.0	96.0	97.0	-1.0	Pass	-
29	-	11/07/2023	-	2	0.0	97.0	110.0	2.0	Pass	-
30	-	11/07/2023	-	1	0.0	97.0	99.0	0.0	Pass	-
31	-	12/07/2023	-	4	0.0	96.0	107.0	1.5	Pass	-
32	-	12/07/2023	-	4	0.0	98.5	108.5	2.0	Pass	-
33	-	12/07/2023	-	5	0.0	97.0	98.0	-0.5	Pass	-
34	-	13/07/2023	-	6	0.0	96.0	97.0	-0.5	Pass	-
35	-	13/07/2023	-	6	0.0	97.0	97.0	-0.5	Pass	-
36	-	13/07/2023	-	6	0.0	96.0	99.0	-0.5	Pass	-
37	-	14/07/2023	-	7	0.0	97.0	95.5	-1.0	Pass	-
38	-	14/07/2023	-	7	0.0	96.0	108.0	2.0	Pass	-
39	-	14/07/2023	-	8	0.0	96.5	98.0	-0.5	Pass	-
40	-	17/07/2023	-	1	0.0	97.5	97.5	-0.5	Pass	-
41	-	17/07/2023	-	2	0.0	98.5	96.5	-0.5	Pass	-
42	-	17/07/2023	-	3	0.0	96.0	98.0	-0.5	Pass	-
43	-	18/07/2023	-	5	0.0	96.5	97.0	-1.0	Pass	-
44	-	18/07/2023	-	5	0.0	96.0	99.0	0.0	Pass	-
45	-	18/07/2023	-	5	0.0	97.5	98.5	-0.5	Pass	-
46	-	19/07/2023	-	4	0.0	96.0	99.0	0.0	Pass	-
47	-	19/07/2023	-	4	0.0	96.0	98.5	-0.5	Pass	-
48	-	19/07/2023	-	5	0.0	96.5	96.5	-0.5	Pass	-
49	-	20/07/2023	-	1	0.0	96.5	99.0	-0.5	Pass	-
50	-	20/07/2023	-	1	0.0	96.5	97.5	-0.5	Pass	-
51	-	20/07/2023	-	2	0.0	95.5	95.5	-0.5	Pass	-
52	-	21/07/2023	-	9	0.0	97.0	96.0	-0.5	Pass	-
53	-	21/07/2023	-	10	0.0	96.0	107.5	1.5	Pass	-
54	-	21/07/2023	-	10	0.0	97.0	99.0	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)

55	-	24/07/2023	-	11	0.0	97.0	97.0	-1.0	Pass	-
56	-	24/07/2023	-	11	0.0	96.5	98.0	-0.5	Pass	-
57	-	24/07/2023	-	12	0.0	96.5	98.0	-0.5	Pass	-
58	-	25/07/2023	-	13	0.0	99.0	99.0	-0.5	Pass	-
59	-	25/07/2023	-	13	0.0	97.0	97.0	-0.5	Pass	-
60	-	25/07/2023	-	13	0.0	96.5	96.5	-1.0	Pass	-
61	-	26/07/2023	-	10	0.0	97.5	98.0	-0.5	Pass	-
62	-	26/07/2023	-	10	0.0	96.5	99.0	-0.5	Pass	-
63	-	26/07/2023	-	14	0.0	96.5	97.0	-0.5	Pass	-
64	-	27/07/2023	-	1	0.0	96.0	99.0	0.0	Pass	-
65	-	27/07/2023	-	2	0.0	97.0	98.5	-0.5	Pass	-
66	-	27/07/2023	-	3	0.0	97.0	97.5	-0.5	Pass	-
67	-	28/07/2023	-	3	4.6	96.0	109.0	1.5	Pass	-
68	-	28/07/2023	-	3	5.2	98.0	97.5	-0.5	Pass	-
69	-	28/07/2023	-	3	2.1	97.0	107.5	2.0	Pass	-
70	-	31/07/2023	-	1	3.0	96.5	97.0	-0.5	Pass	-
71	-	31/07/2023	-	2	3.5	98.0	98.0	-0.5	Pass	-
72	-	31/07/2023	-	2	0.9	98.0	106.5	1.5	Pass	-
73	-	1/08/2023	-	8	0.0	96.5	97.5	-0.5	Pass	-
74	-	1/08/2023	-	7	0.0	96.5	99.0	0.0	Pass	-
75	-	1/08/2023	-	7	0.0	97.5	96.5	-0.5	Pass	-
76	-	2/08/2023	-	4	0.0	97.5	96.5	-0.5	Pass	-
77	-	2/08/2023	-	4	0.0	96.5	98.5	-0.5	Pass	-
78	-	2/08/2023	-	4	0.0	97.5	108.0	2.0	Pass	-
79	-	3/08/2023	-	4	0.0	96.5	96.0	-0.5	Pass	-
80	-	3/08/2023	-	6	0.0	96.0	98.0	-0.5	Pass	-
81	-	3/08/2023	-	6	0.0	97.0	96.5	-0.5	Pass	-
82	-	4/08/2023	-	1	0.0	96.5	99.0	0.0	Pass	-
83	-	4/08/2023	-	1	-0.5	96.5	97.0	-0.5	Pass	-
84	-	4/08/2023	-	1	1.5	96.0	106.5	1.5	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)

85	-	7/08/2023	-	1	2.0	96.0	108.5	2.0	Pass	-
86	-	7/08/2023	-	3	1.5	96.5	108.0	1.5	Pass	-
87	-	7/08/2023	-	3	0.0	97.0	98.5	0.0	Pass	-
88	-	8/08/2023	-	1	0.0	96.5	99.0	-0.5	Pass	-
89	-	8/08/2023	-	1	0.0	96.0	100.0	0.0	Pass	-
90	-	8/08/2023	-	3	0.0	97.0	96.0	-0.5	Pass	-
91	-	9/08/2023	-	2	0.0	96.0	96.0	-1.0	Pass	-
92	-	9/08/2023	-	4	0.0	95.5	99.0	-0.5	Pass	-
93	-	9/08/2023	-	4	0.0	96.0	98.0	-0.5	Pass	-
94	-	10/08/2023	-	1	0.0	96.0	108.0	2.0	Pass	-
95	-	10/08/2023	-	1	0.0	97.0	96.5	-1.0	Pass	-
96	-	10/08/2023	-	1	0.0	97.0	109.0	2.0	Pass	-
97	-	11/08/2023	-	2	0.0	96.0	97.0	-1.0	Pass	-
98	-	11/08/2023	-	2	0.0	97.0	107.5	2.0	Pass	-
99	-	11/08/2023	-	1	0.0	97.0	98.5	-0.5	Pass	-
100	-	14/08/2023	-	2	0.0	96.0	97.0	-0.5	Pass	-
101	-	14/08/2023	-	3	0.0	97.0	98.5	-0.5	Pass	-
102	-	14/08/2023	-	3	0.0	97.0	109.5	2.0	Pass	-
103	-	15/08/2023	-	5	0.0	96.0	107.0	2.0	Pass	-
104	-	15/08/2023	-	1	0.0	97.0	108.0	2.0	Pass	-
105	-	15/08/2023	-	1	0.0	97.0	99.0	-0.5	Pass	-
106	-	16/08/2023	-	3	0.0	96.0	109.0	2.0	Pass	-
107	-	16/08/2023	-	3	0.0	97.0	98.0	-0.5	Pass	-
108	-	16/08/2023	-	4	0.0	97.0	97.0	-0.5	Pass	-
109	-	17/08/2023	-	3	0.0	96.0	110.0	2.0	Pass	-
110	-	17/08/2023	-	3	0.0	97.0	110.0	2.0	Pass	-
111	-	17/08/2023	-	3	0.0	98.5	108.0	2.0	Pass	-
112	-	21/08/2023	-	4	0.0	96.0	98.5	-0.5	Pass	-
113	-	21/08/2023	-	4	0.0	97.0	107.0	1.5	Pass	-
114	-	21/08/2023	-	4	0.0	98.5	109.5	2.0	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)

115	-	22/08/2023	-	6	0.0	98.5	99.0	0.0	Pass	-
116	-	22/08/2023	-	6	0.0	97.0	98.5	-0.5	Pass	-
117	-	22/08/2023	-	7	0.0	98.5	96.5	-1.0	Pass	-
118	-	25/08/2023	-	5	0.0	96.0	99.0	-0.5	Pass	-
119	-	25/08/2023	-	5	0.0	97.0	97.0	-0.5	Pass	-
120	-	25/08/2023	-	6	0.0	97.0	108.5	2.0	Pass	-
121	-	28/08/2023	-	8	0.0	96.0	97.5	-1.0	Pass	-
122	-	28/08/2023	-	8	0.0	97.0	108.5	2.0	Pass	-
123	-	28/08/2023	-	8	0.0	97.0	96.0	-1.0	Pass	-
124	-	29/08/2023	-	6	0.0	96.0	98.5	-0.5	Pass	-
125	-	29/08/2023	-	6	0.0	97.0	109.5	2.0	Pass	-
126	-	29/08/2023	-	7	0.0	97.0	98.5	-0.5	Pass	-
127	-	30/08/2023	-	7	0.0	98.5	96.0	-1.0	Pass	-
128	-	30/08/2023	-	6	0.0	98.5	97.5	-0.5	Pass	-
129	-	30/08/2023	-	7	0.0	97.0	109.5	2.0	Pass	-
130	-	31/08/2023	-	7	0.0	98.5	109.0	2.0	Pass	-
131	-	31/08/2023	-	8	0.0	97.5	108.5	1.5	Pass	-
132	-	31/08/2023	-	8	0.0	97.0	97.0	-0.5	Pass	-
133	-	1/09/2023	-	9	0.0	97.0	99.5	0.0	Pass	-
134	-	1/09/2023	-	8	0.0	96.0	106.5	1.5	Pass	-
135	-	1/09/2023	-	8	0.0	97.5	106.5	2.0	Pass	-
136	-	4/09/2023	-	3	0.0	96.0	96.5	-0.5	Pass	-
137	-	4/09/2023	-	3	0.0	96.5	99.0	-0.5	Pass	-
138	-	4/09/2023	-	4	0.0	96.5	97.5	-0.5	Pass	-
139	-	5/09/2023	-	6	0.0	96.0	95.5	-1.0	Pass	-
140	-	5/09/2023	-	6	0.0	96.5	108.0	2.0	Pass	-
141	-	5/09/2023	-	6	0.0	97.5	99.0	-0.5	Pass	-
142	-	6/09/2023	-	4	0.0	96.0	97.5	-0.5	Pass	-
143	-	6/09/2023	-	4	0.0	96.5	98.0	-0.5	Pass	-
144	-	6/09/2023	-	4	0.0	97.0	99.0	-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)

145	-	7/09/2023	-	13	0.0	96.0	98.0	-0.5	Pass	-
146	-	7/09/2023	-	13	0.0	96.0	99.5	0.0	Pass	-
147	-	7/09/2023	-	13	0.0	97.0	97.5	-0.5	Pass	-
148	-	11/09/2023	-	4	0.0	96.5	99.0	0.0	Pass	-
149	-	11/09/2023	-	4	0.0	97.0	97.0	-0.5	Pass	-
150	-	11/09/2023	-	5	0.0	96.0	98.5	-0.5	Pass	-
151	-	21/09/2023	-	FSL	0.0	97.0	99.0	-0.5	Pass	-
152	-	21/09/2023	-	FSL	0.0	96.0	97.0	-0.5	Pass	-
153	-	21/09/2023	-	FSL	0.0	96.5	100.0	0.0	Pass	-
154	-	22/09/2023	-	FSL	0.0	95.5	97.5	-0.5	Pass	-
155	-	22/09/2023	-	FSL	0.0	96.0	98.5	-0.5	Pass	-
156	-	22/09/2023	-	FSL	0.0	96.0	97.5	-0.5	Pass	-
157	-	25/09/2023	-	FSL	0.0	96.0	109.0	1.5	Pass	-
158	-	25/09/2023	-	FSL	0.0	97.0	110.0	2.0	Pass	-
159	-	25/09/2023	-	FSL	0.0	97.0	96.5	-0.5	Pass	-
160	-	26/09/2023	-	FSL	0.0	96.0	97.0	-1.0	Pass	-
161	-	26/09/2023	-	FSL	0.0	97.0	108.0	2.0	Pass	-
162	-	26/09/2023	-	FSL	0.0	97.0	108.5	1.5	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)

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## **Appendix D – NATA Test Results**

# Field Density Test Results

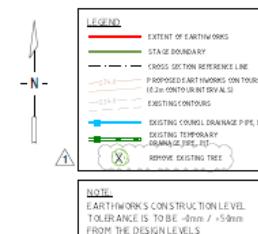
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	1
<b>Location:</b>	Mickleham				
Sample No	1	2	3		
Date Tested	29/06/2023	29/06/2023	29/06/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	1	1	1		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.83	1.88		
Field Moisture Content	%	22.9	23.8		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	1.89	1.91		
Optimum Moisture Content	%	21	24		
<b>Moisture Ratio</b>	%	109	99	108	
<b>Moisture Variation from OMC</b>	%	2.0	-0.5	1.5	
<b>Density Ratio</b>	%	97.0	98.5	98.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI01)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	01/08/2023
 <p style="text-align: center;"><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p style="text-align: center;">NATA Accredited Laboratory No. 20172 Accreditation for compliance with ISO/IEC 17025 - Testing</p> <p style="text-align: right;">Approved Signatory:  David Burns 01/08/2023</p>					



Test Location

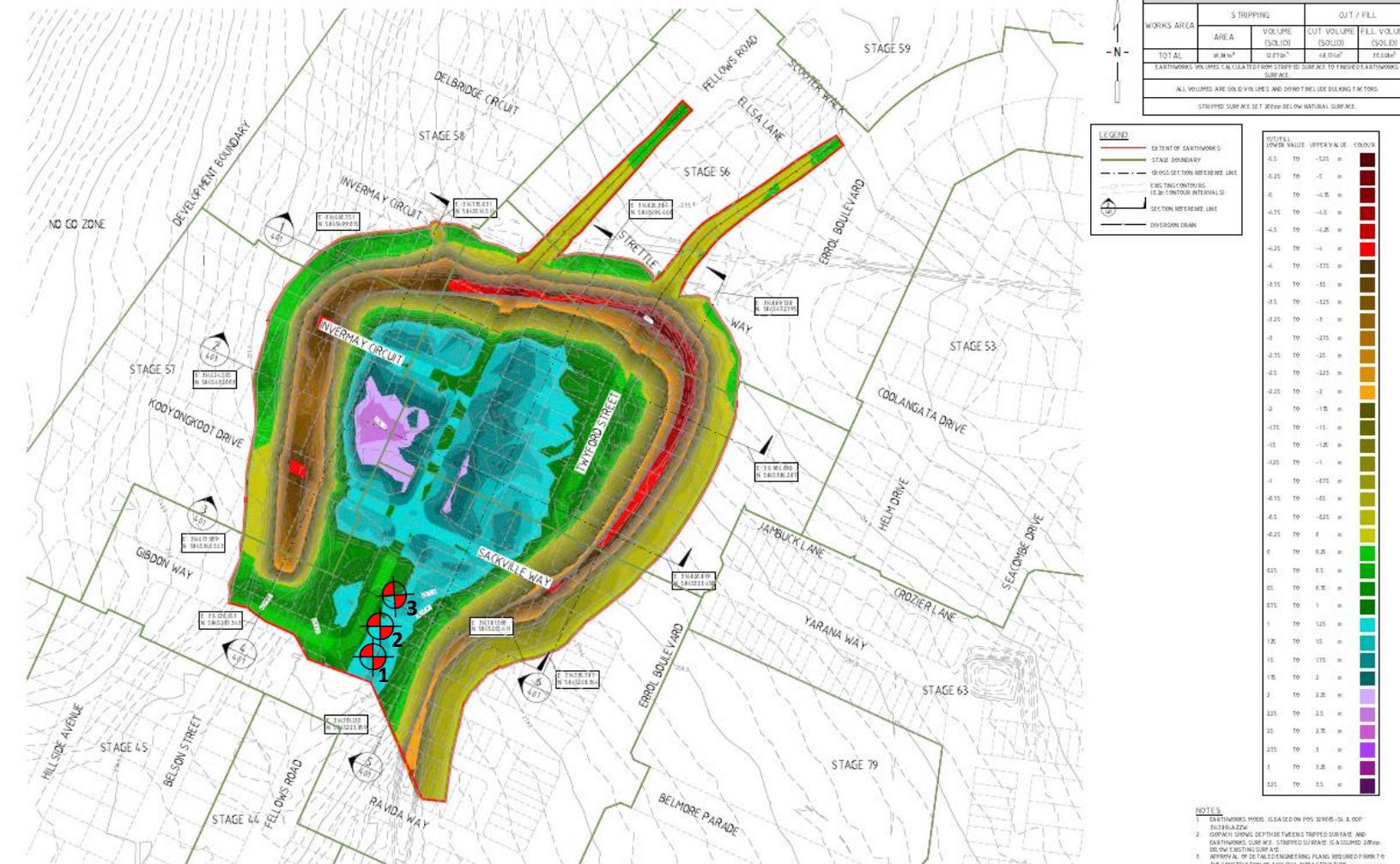


**NOTES:**

1. FOR THE POINTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 698, 699, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 789, 790, 791, 792, 793, 794, 795, 796, 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## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUKE CITY COUNCIL

**CONSTRUCTION**      366 F1      17040-54      EW301      0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (S101)**

SITE PLAN SKETCH=NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

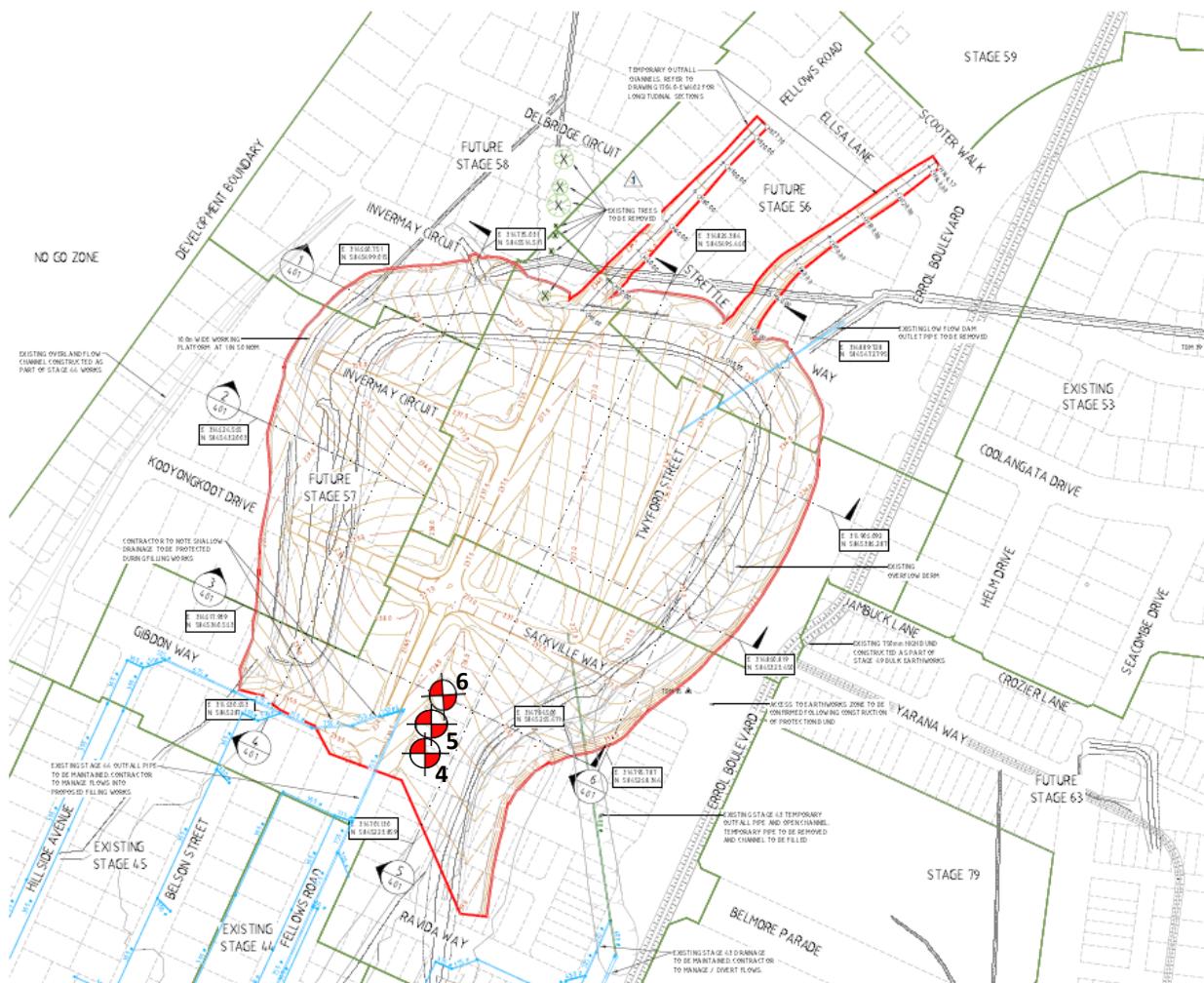
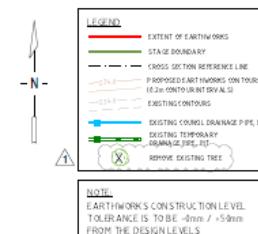
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	2
<b>Location:</b>	Mickleham				
Sample No	4	5	6		
Date Tested	30/06/2023	30/06/2023	30/06/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	2	2	2		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.85	1.83		
Field Moisture Content	%	21.0	22.1	23.5	
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.92	1.89	1.89	
Optimum Moisture Content	%	21.5	20.5	21.5	
<b>Moisture Ratio</b>	%	97.5	108	109.5	
<b>Moisture Variation from OMC</b>	%	-0.5	1.5	2.0	
<b>Density Ratio</b>	%	Drier	Wetter	Wetter	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI02)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
	NATA Accredited Laboratory No. 20172 Accreditation for compliance with ISO/IEC 17025 - Testing			<b>Date:</b>	David Burns 01/08/2023



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 30 40 50 60 70

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Mataura East VIC 3142  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

366 F1

17040-54

EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
30/06/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI02)

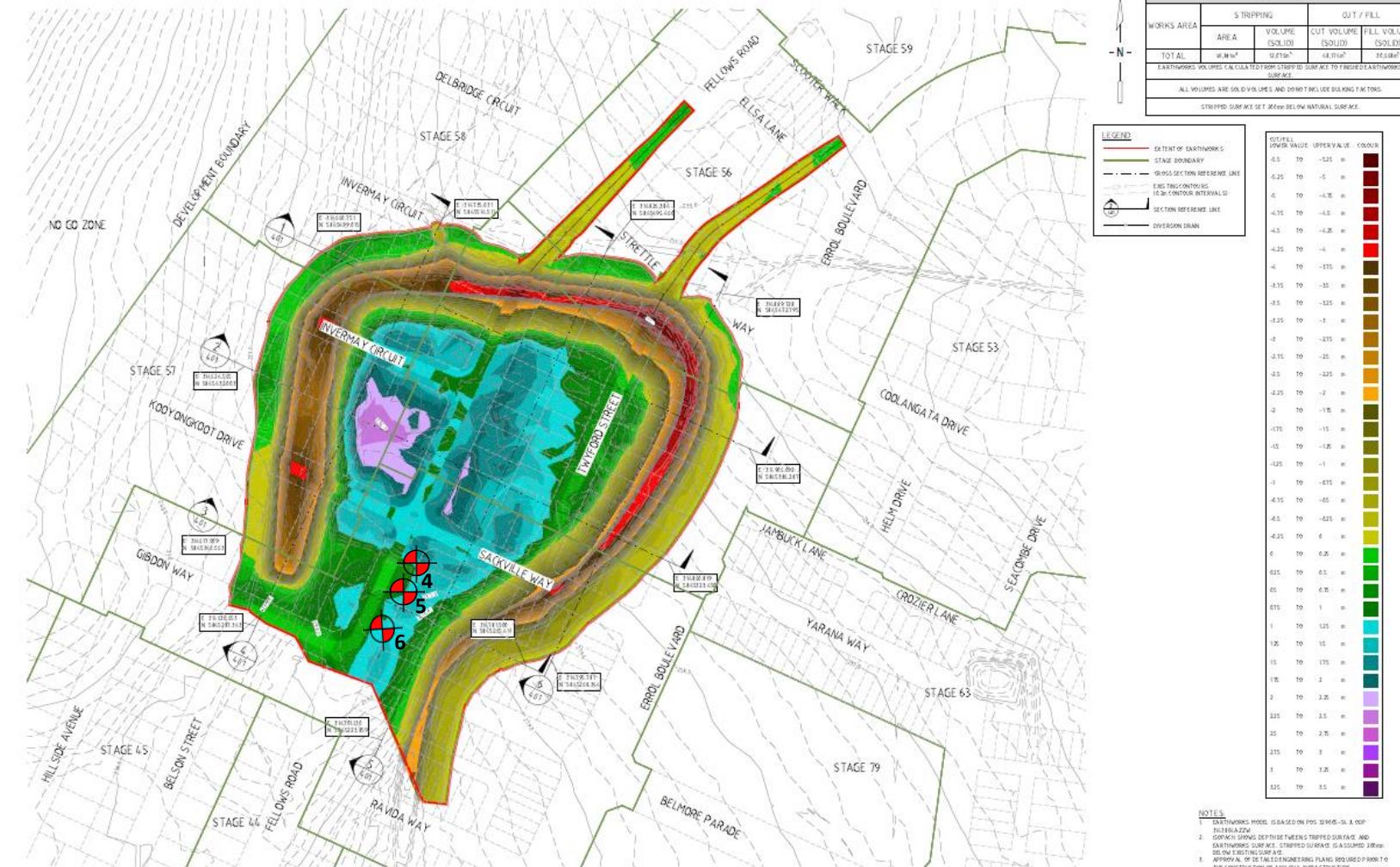
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				REVISOR	
				J BARCELO	
				REVISOR	
				LAPAP	
2 CONSTRUCTION ISSUE	LLAPAP	EMAIL.DT	MMBREVISOR	G.ROMANZC	
REV DESCRIPTION	APPROVED	DATE			



HUME CITY COUNCIL		PERMIT NO.		
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		BULK EARTHWORKS ISOPACH PLAN		
<b>CONSTRUCTION</b>	366 F1	17040-54	EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
30/06/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S102)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

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# Field Density Test Results

## AS1289.5.7.1

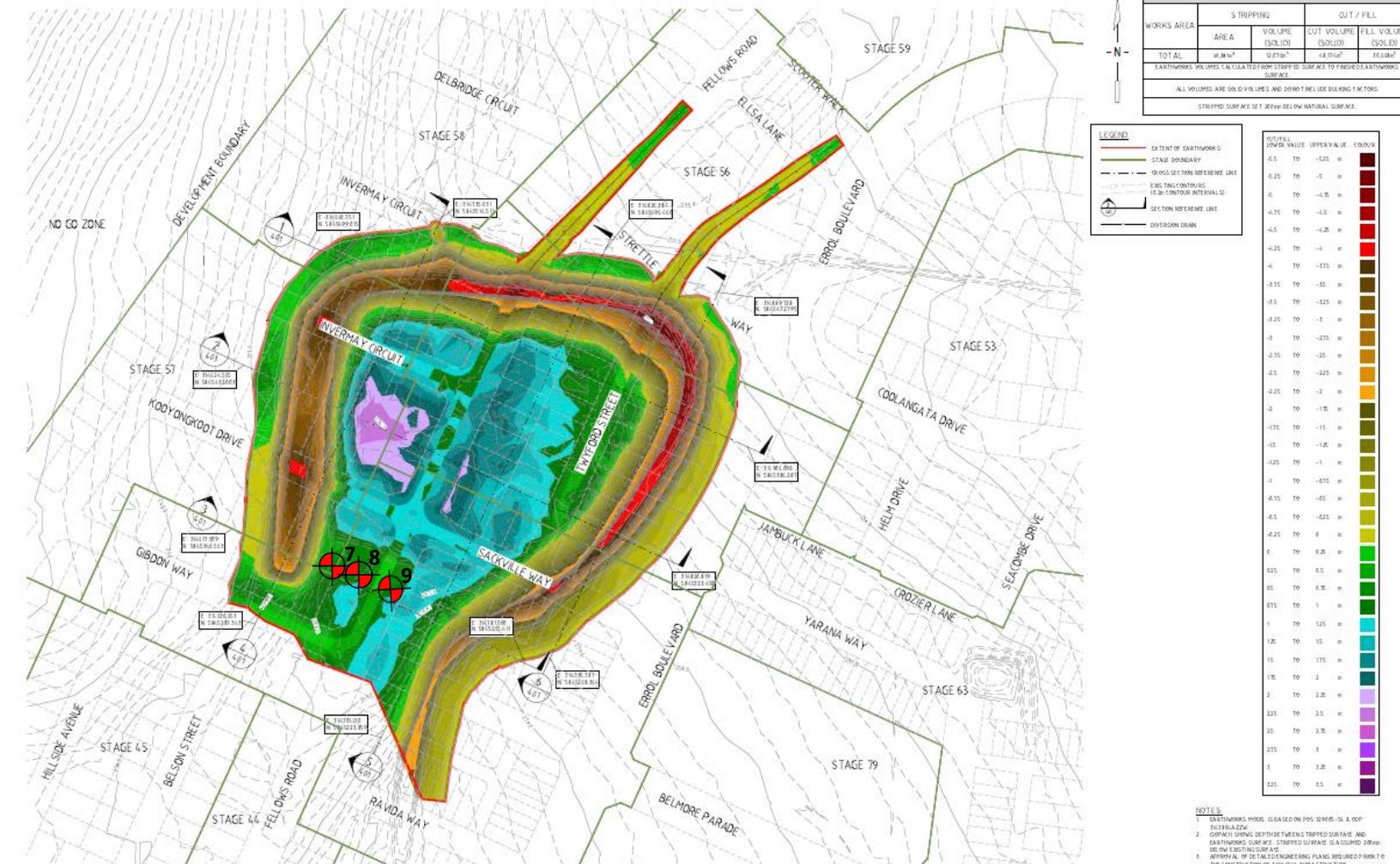
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	3
<b>Location:</b>	Mickleham				
Sample No	7	8	9		
Date Tested	03/07/2023	03/07/2023	03/07/2023		
Time Tested	AM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		3	3	4	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.92	1.95	1.89	
Field Moisture Content	%	23.1	22.4	24.8	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.98	2.02	1.96	
Optimum Moisture Content	%	24	23	25	
<b>Moisture Ratio</b>	%	96.5	97.5	99	
<b>Moisture Variation from OMC</b>	%	-0.5	-1.0	0.0	
<b>Density Ratio</b>	%	Drier	Drier	OMC	
		97.0	96.5	96.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI03)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	17/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p><b>NATA Accredited Laboratory No. 20172</b> Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns 17/08/2023</p> </div> </div>					





## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	REQUEST REF: 366 F1
	PROJECT NO: 17040-54
	EW301
	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
03/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S103)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	4			
<b>Location:</b>	Mickleham							
Sample No	10	11	12					
Date Tested	04/07/2023	04/07/2023	04/07/2023					
Time Tested	AM	AM	AM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	4	5	5					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.95	1.84					
Field Moisture Content	%	21.3	23.1					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	4.1	3.2					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	2.00	1.87					
Optimum Moisture Content	%	19.5	21					
<b>Moisture Ratio</b>	%	109.5	110					
<b>Moisture Variation from OMC</b>	%	2.0	2.0	-0.5				
<b>Density Ratio</b>	%	Wetter	Wetter	Drier				
		96.5	98.0	98.0				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI04)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 17/08/2023								



## Test Location



			<b>J.BARCE</b>
1	TREES TO BE REMOVED	LAP-#	710.23
6	CONSTRUCTION ISSUE	LAP-#	710.23
REV	REMARKS	AMOUNT	DATE

H 1:1000  
A1

10

1

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1

merrifield  
**M&B**

ield  
GPC

**verve**  
und Floor, 207-213 Victoria  
Malvern East VIE  
: 03 8573 1500 verve  
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ve  
Vaverley Road,  
C 3145  
veprojects.com  
Phy Ltd

MERRIFIELD

HUME CITY COUNCIL  
FIELD LIVING - S  
STAGE 54  
MICKLEHAM  
CONSTRUCTION

SECTION D

BULK EA  
LAYO

0-54 EW201

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1

10

## **PROJECT:**

Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**

BMD Urban

DATE

04/07/2023

**LOCATION:**

Mickleham

PROJECT No:

1130.0438.1 (S104)

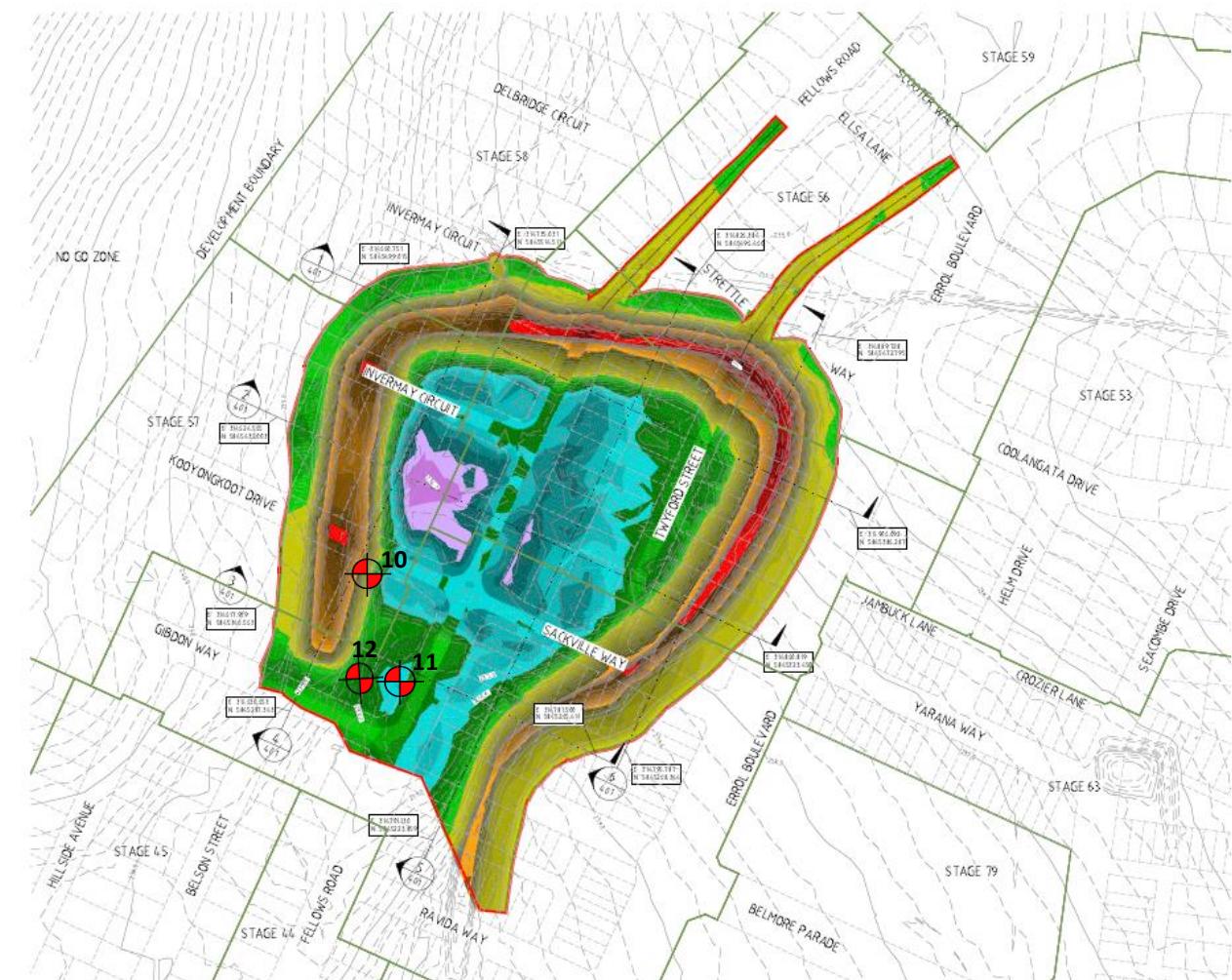
SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES  
GEOTECHNICAL ENGINEERING CONSULTANTS



Test Location



LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	Black
-4.25	-5	Dark Red
-4	-4.5	Red
-4.25	-4.5	Dark Brown
-4.5	-4.25	Brown
-4	-3.5	Dark Olive Green
-3.5	-3.25	Olive Green
-3.25	-3	Light Green
-3	-2.5	Yellow Green
-2.5	-2	Yellow
-2	-1.5	Light Yellow
-1.5	-1.25	Light Green
-1.25	-1	Light Blue
-1	-0.5	Medium Blue
-0.5	0	Dark Blue
0	0.25	Medium Blue
0.25	0.5	Light Blue
0.5	1	Light Blue
1	1.25	Cyan
1.25	1.5	Cyan
1.5	1.75	Cyan
1.75	2	Cyan
2	2.25	Purple
2.25	2.5	Purple
2.5	3	Purple
3	3.25	Dark Purple
3.25	3.5	Dark Purple

CONSTRUCTION ISSUE	LAPAF	APPROVED	DATE	BAROLO	
				REVISION	APPROVED
REV 1	LAPAF 1261-21	APPROVED	G.ROMANZ	H 1:1000 0 10 20 30 40 50 60 70	A1



HUME CITY COUNCIL		BULK EARTHWORKS ISOPACH PLAN	
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		CONSTRUCTION	
REF ID: 366 F1	PROJECT NO: 17040-54	ISSUE DATE: 04/07/2023	REV: EW301

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
04/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S104)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

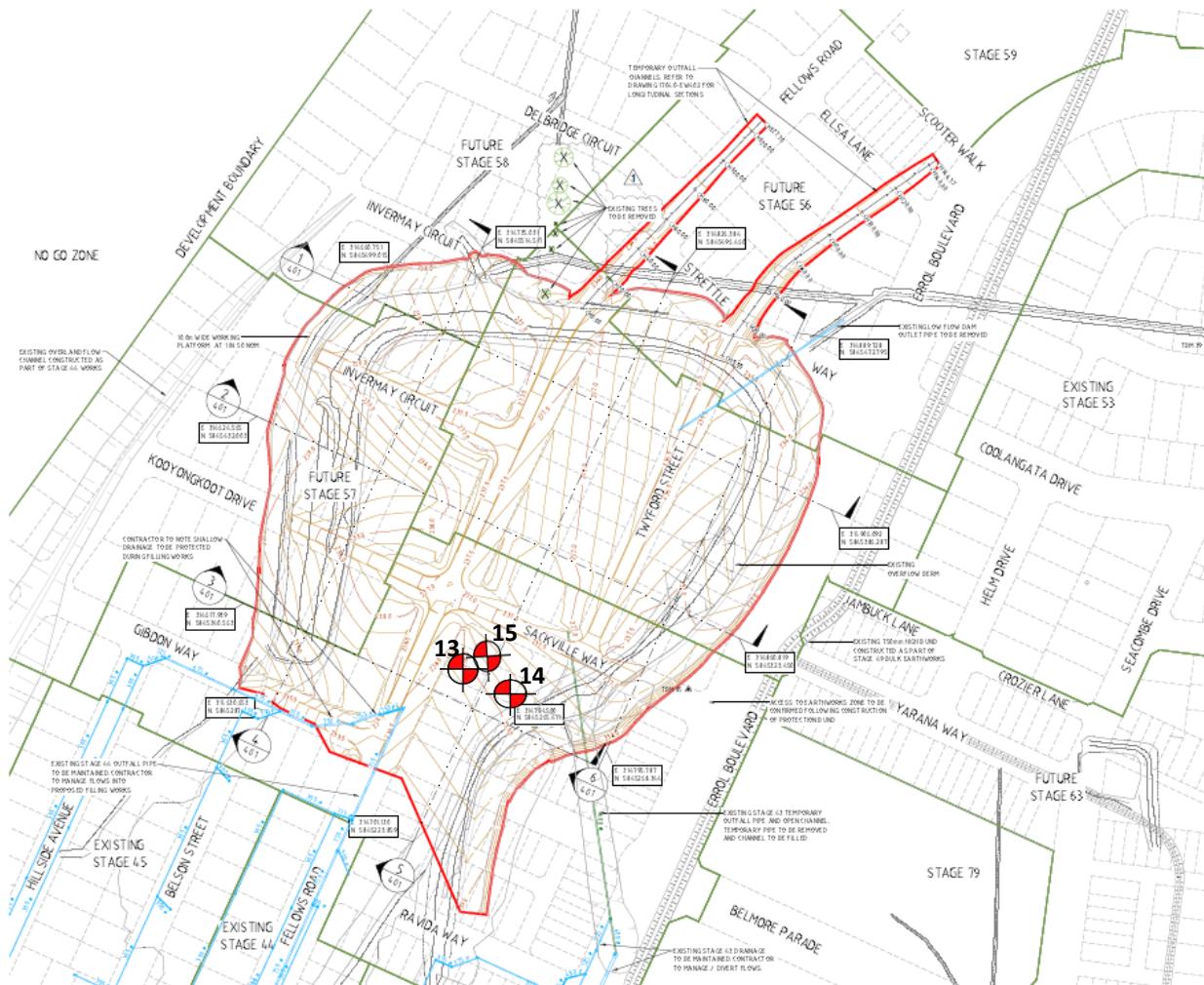
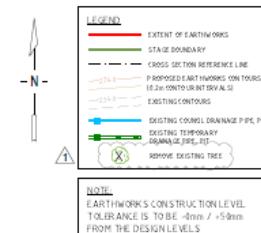
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	5
<b>Location:</b>	Mickleham				
Sample No	13	14	15		
Date Tested	05/07/2023	05/07/2023	05/07/2023		
Time Tested	AM	AM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	5	5	5		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.94	1.88		
Field Moisture Content	%	23.3	25.0		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	3.6	3.9		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.01	1.94		
Optimum Moisture Content	%	23.5	23.5		
<b>Moisture Ratio</b>	%	99	106.5		
<b>Moisture Variation from OMC</b>	%	-0.5	1.5		
<b>Density Ratio</b>	%	Drier	Wetter		
		96.0	96.0		
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI05)				
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> </div> <div> <p><b>NATA Accredited Laboratory No. 20172</b> Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns Date: 17/08/2023</p> </div> </div>					



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80  
A1
**merrifield**  
**MAB GPC**
**verve**  
Ground Floor, 207-213 Waverley Road,  
Matvern East VIC 3142  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

REF: 366 F1 INC: 17040-54 EW: 201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
05/07/2023

**LOCATION:**  
Mickleham

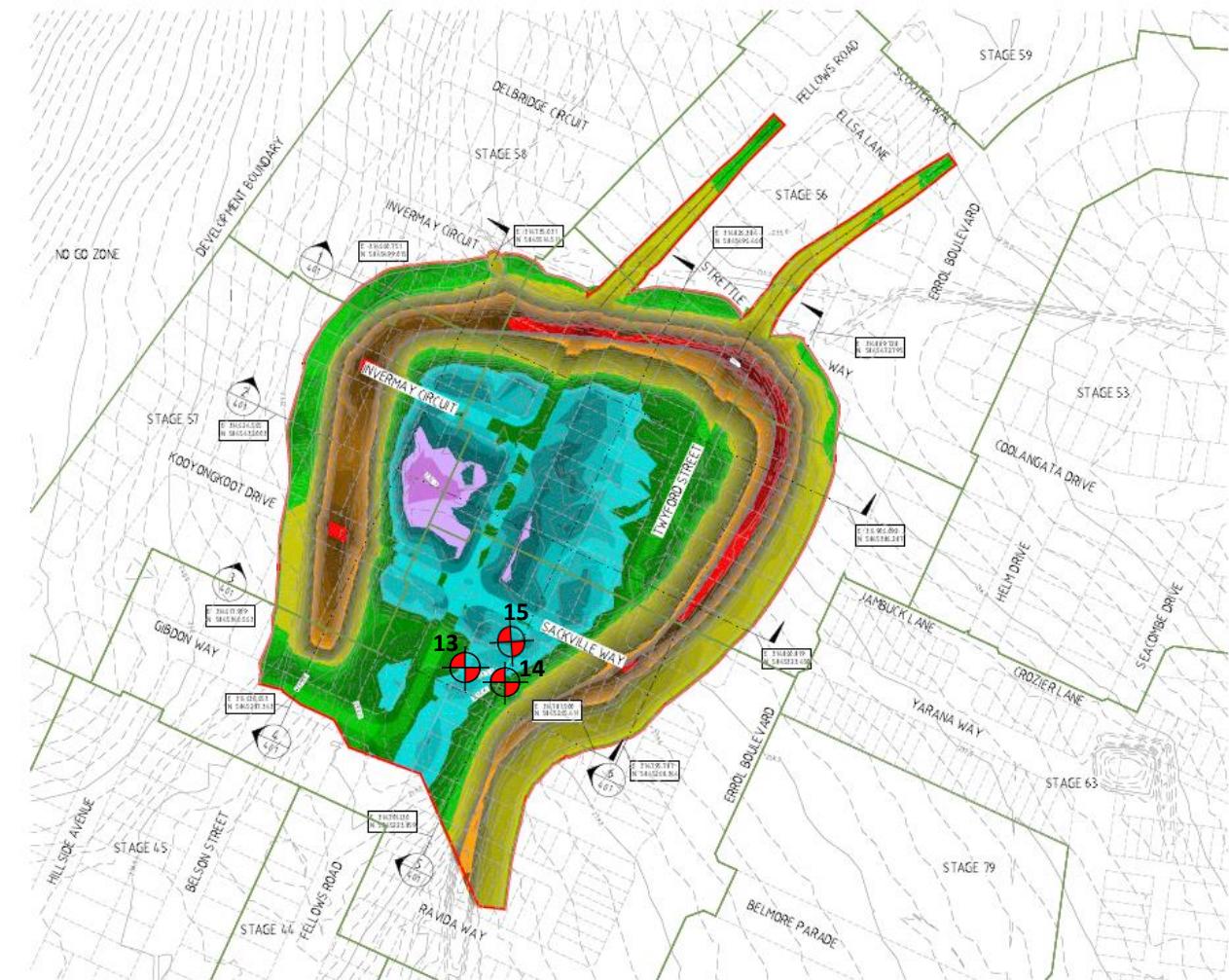
**PROJECT No:**  
1120 0428-1 (SI05)

SITE PLAN SKETCH—NOT TO SCALE


**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



Test Location



WORKS AREA	VOLUMES		CUT / FILL
	STRIPPING	CUT VOLUME	
TOTAL	AREA (m²)	VOLUME (m³)	CUT VOLUME (m³)
EARTHWORKS VOLUMES CALCULATED FROM STRIPPED SURFACE TO FINISHED EARTHWORKS SURFACE			
ALL VOLUMES ARE SOLID VOLUMES AND DO NOT INCLUDE BULKING FACTORS			
STRIPPED SURFACE SET 300mm BELOW NATURAL SURFACE			

LEGEND

- EXTENT OF EARTHWORKS
- STAGE BOUNDARY
- GROSS SECTION REFERENCE LINE
- EXISTING CONTOURS (10cm CONTOUR INTERVALS)
- SECTION REFERENCE LINE
- DIVISION DRAIN

LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	
-4.25	-5	
-4	-4.5	
-4.25	-4.5	
-4.5	-4.25	
-4.25	-4	
-4	-3.75	
-3.75	-3.5	
-3.5	-3.25	
-3.25	-3	
-3	-2.75	
-2.75	-2.5	
-2.5	-2.25	
-2.25	-2	
-2	-1.75	
-1.75	-1.5	
-1.5	-1.25	
-1.25	-1	
-1	-0.75	
-0.75	-0.5	
-0.5	0	
0	0.25	
0.25	0.5	
0.5	1	
1	1.25	
1.25	1.5	
1.5	1.75	
1.75	2	
2	2.25	
2.25	2.5	
2.5	2.75	
2.75	3	
3	3.25	
3.25	3.5	

NOTES:

- EARTHWORKS MODEL IS BASED ON POS 159.950-51 & 00P INCLINOMETER
- DEPTH IS THE DEPTH BETWEEN TRIPPED SURFACE AND EARTHWORKS SURFACE. STRIPPED SURFACE IS ASSUMED 300mm BELOW EXISTING SURFACE
- APPROVAL OF THE ENGINEERING PLANS REQUIRED BEFORE THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE

CONSTRUCTION ISSUE	LAPAF	MARSH	BAROLO	BAROLO	BAROLO
REV	CONSTRUCTION APPROVED	DATE	APPROVED	APPROVED	APPROVED
	LAPAF 24/6/21		G.ROMANZ		

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 31545  
TEL: 03 8273 1500 verveprojects.com  
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HUME CITY COUNCIL  
PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54 MICKLEHAM  
CONSTRUCTION  
REF ID: 366 F1 PROJECT NO: 17040-54 DRAWING NO: EW301

PROJECT: Merrifield Estate – Section D – Stage 54 (Level 1)	CLIENT: BMD Urban	DATE: 05/07/2023	A&Y ASSOCIATES GEOTECHNICAL ENGINEERING CONSULTANTS
LOCATION: Mickleham	PROJECT No: 1120 0428-1 (SI05)	SITE PLAN SKETCH—NOT TO SCALE	

# Field Density Test Results

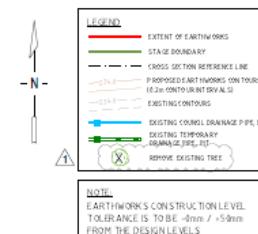
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	6
<b>Location:</b>	Mickleham				
Sample No	16	17	18		
Date Tested	06/07/2023	06/07/2023	06/07/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	6	6	7		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.88	1.94		
Field Moisture Content	%	24.3	23.5		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	5.4	2.9	4.1	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.94	2.01	2.03	
Optimum Moisture Content	%	24.5	24	23.5	
<b>Moisture Ratio</b>	%	99	98	98	
<b>Moisture Variation from OMC</b>	%	0.0	-0.5	-0.5	
<b>Density Ratio</b>	%	OMC	Drier	Drier	
		96.0	95.5	95.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI06)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	17/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					

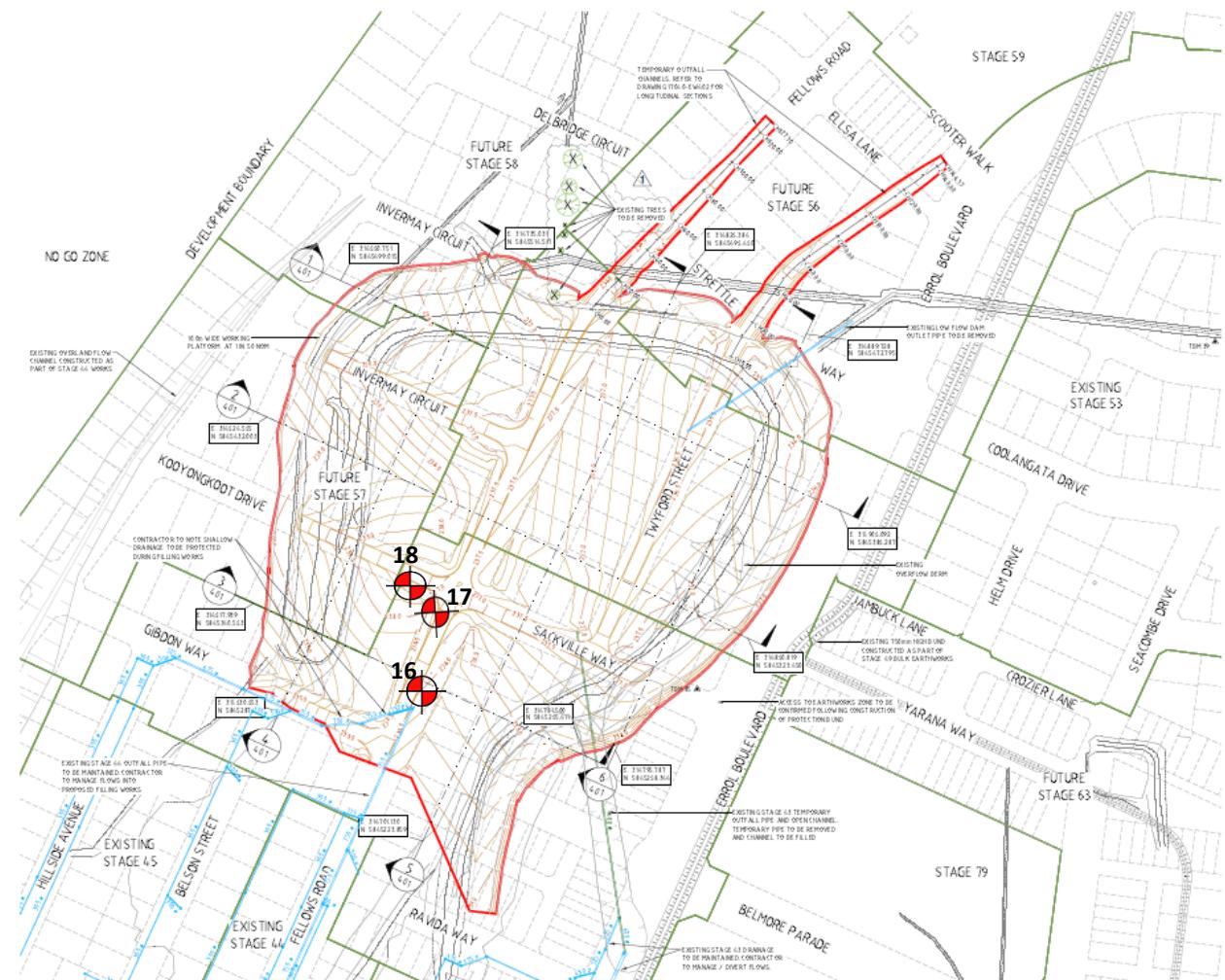


Test Location



**NOTES:**

1. FOR THE POINTS ON THIS INFORMATION REFER TO VERTIS CONTROL PLAN MERRIFIELD SECTION D EARTHWORKS PLAN, JUNE 2023.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS ACTIVITIES.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3144  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

**CONSTRUCTION**BULK EARTHWORKS  
LAYOUT PLAN

366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
06/07/2023

**LOCATION:**  
Mickleham

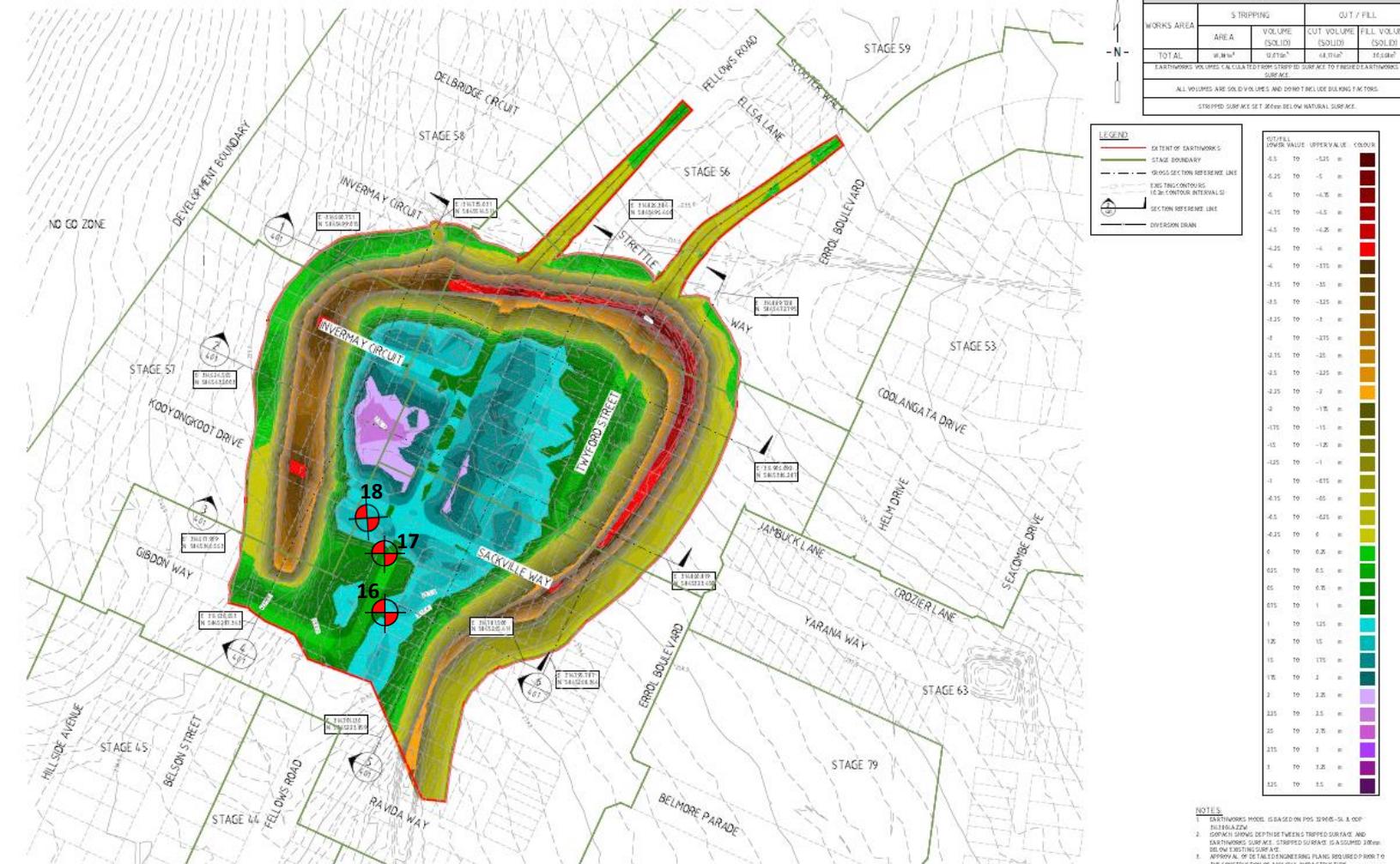
**PROJECT No:**  
1120 0428-1 (SI06)

SITE PLAN SKETCH—NOT TO SCALE

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	REQUEST REF: 366 F1
	PROJECT NO: 17040-54
	EW301
	0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
06/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S106)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	7
<b>Location:</b>	Mickleham				
Sample No	19	20	21		
Date Tested	07/07/2023	07/07/2023	07/07/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		8	8	8	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.93	1.92	1.89	
Field Moisture Content	%	23.5	25.0	25.3	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	4.3	3.6	5.6	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.01	1.99	1.96	
Optimum Moisture Content	%	24.5	23.5	23.5	
<b>Moisture Ratio</b>	%	96	106.5	107.5	
<b>Moisture Variation from OMC</b>	%	-1.0	1.5	1.5	
<b>Density Ratio</b>	%	Drier	Wetter	Wetter	
		95.5	96.5	95.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI07)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns <small>Date: 17/08/2023</small>					



Test Location



1. FOR THE POINTS ON THIS PLAN, INFORMATION REFER TO VERTIS CONTROL PLAN MERRIFIELD TERRACES PLAT J-2023.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING CONSTRUCTION AND REMOVE AS PER CONTRACT.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

		J.BARCEO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3154  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
07/07/2023

**LOCATION:**  
Mickleham

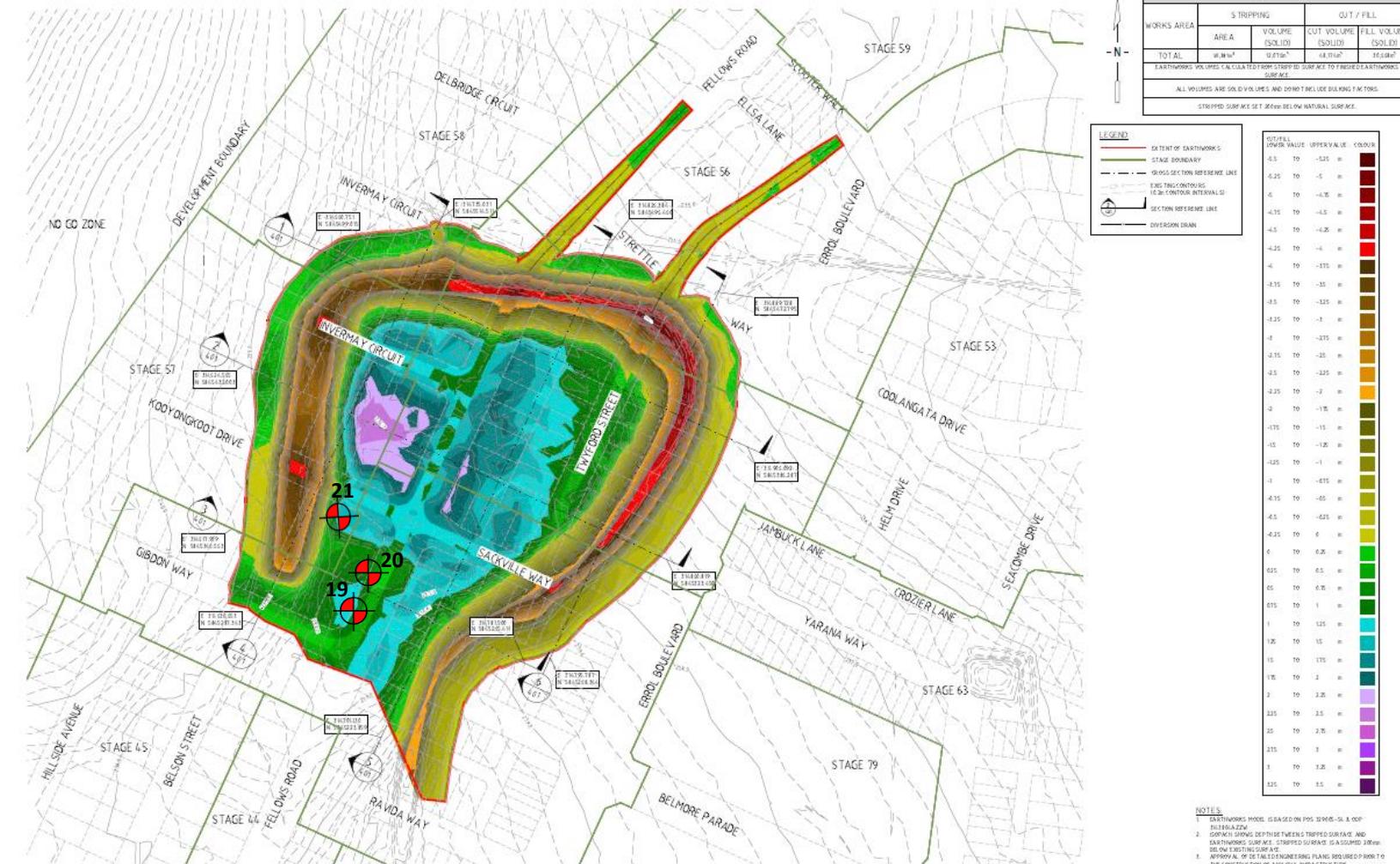
**PROJECT No:**  
1120 0428-1 (SI07)

SITE PLAN SKETCH—NOT TO SCALE

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			NAME: J.BARCELO <small>(REMOVED)</small>	H 1 : 1000    0    10    20    40    60    80
			NAME: J.BARCELO <small>(REMOVED)</small>	0    A1
			APPROVED: LAPAP	
<small>E</small> CONSTRUCTION ISSUE	LAPAP	EMAIL:	APPROVED:	
REV DESCRIPTION	APPROVED DATE		G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	PROJECT NO. 366 F1
	PROJECT NO. 17040-54
	DEPT. EW301
	REGISTRATION NO. 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
07/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S107)**

SITE PLAN SKETCH=NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

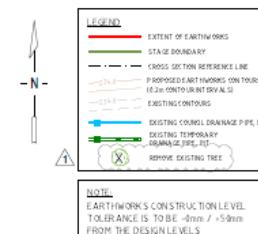
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

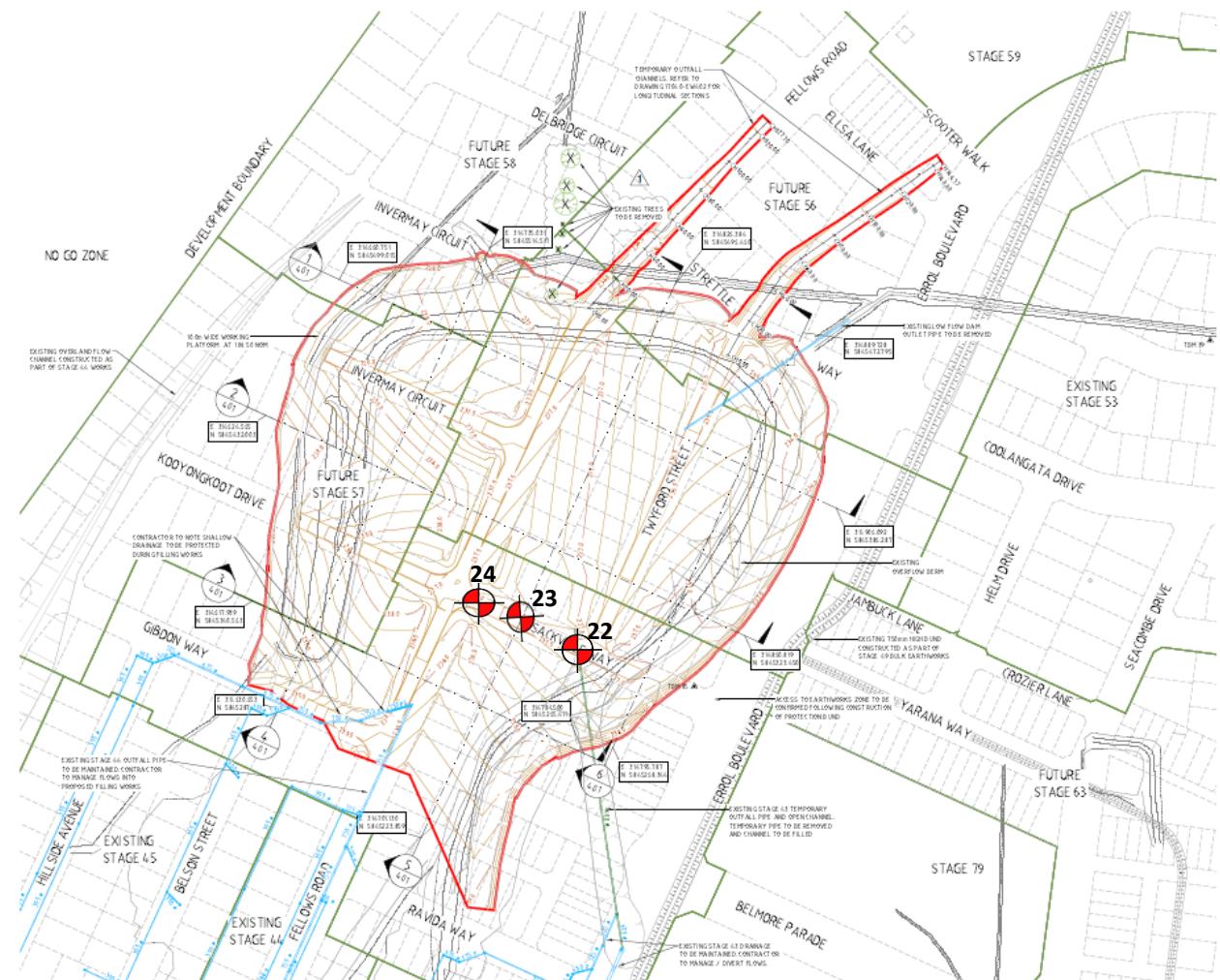
<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	8
<b>Location:</b>	Mickleham				
Sample No	22	23	24		
Date Tested	08/07/2023	08/07/2023	08/07/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	1	1	1		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.92	1.95		
Field Moisture Content	%	23.8	23.6		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	5.2		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.00	2.00		
Optimum Moisture Content	%	24.5	24		
<b>Moisture Ratio</b>	%	97	98.5		
<b>Moisture Variation from OMC</b>	%	-1.0	-0.5		
<b>Density Ratio</b>	%	Drier	Drier		
		96.5	96.5		
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI08)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	17/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



Test Location



- NOTES:**
1. FOR THE POINTS ON THIS INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS LAYOUT PLAN, JAC 2012.
  2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS ACTIVITIES.
  3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVICE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	10/01/23
2. CONSTRUCTION ISSUE:	LAPAP	24/04/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 30 40 50 60 70

A1

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Maitland East VIC 3142  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
08/07/2023

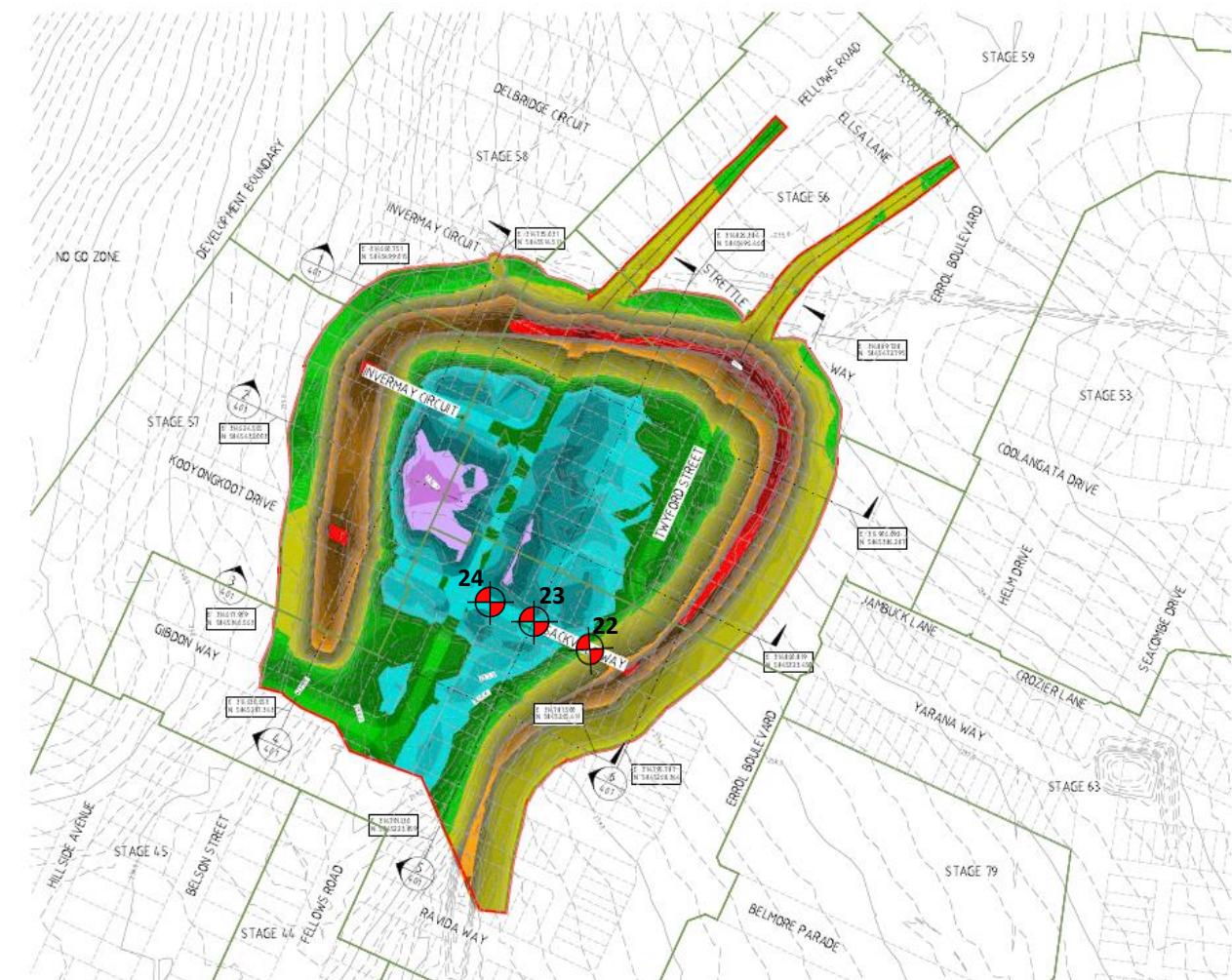
**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI08)

SITE PLAN SKETCH—NOT TO SCALE



Test Location



WORKS AREA	VOLUMES		CUT / FILL
	STRIPPING	CUT VOLUME	
TOTAL	AREA (SQ.M)	VOLUME (CUBIC M)	CUT VOLUME (CUBIC M)
EARTHWORKS VOLUMES CALCULATED FROM STRIPPED SURFACE TO FINISHED EARTHWORKS SURFACE			
ALL VOLUMES ARE SOLID VOLUMES AND DO NOT INCLUDE BULKING FACTORS			
STRIPPED SURFACE SET 300MM BELOW NATURAL SURFACE			

LEGEND

- EXTENT OF EARTHWORKS
- STAGE BOUNDARY
- GROSS SECTION REFERENCE LINE
- EXISTING CONTOURS (10m CONTOUR INTERVALS)
- SECTION REFERENCE LINE
- DIVISION DRAIN

LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	
-4.25	-5	
-4	-4.5	
-4.25	-4.5	
-4.5	-4.25	
-4.25	-4	
-4	-3.75	
-3.75	-3.5	
-3.5	-3.25	
-3.25	-3	
-3	-2.75	
-2.75	-2.5	
-2.5	-2.25	
-2.25	-2	
-2	-1.75	
-1.75	-1.5	
-1.5	-1.25	
-1.25	-1	
-1	-0.75	
-0.75	-0.5	
-0.5	-0.25	
-0.25	0	
0	0.25	
0.25	0.5	
0.5	0.75	
0.75	1	
1	1.25	
1.25	1.5	
1.5	1.75	
1.75	2	
2	2.25	
2.25	2.5	
2.5	2.75	
2.75	3	
3	3.25	
3.25	3.5	

NOTES:

- EARTHWORKS MODEL IS BASED ON POS. SURFACES & OFFICIAL SURFACE
- DEPTH IS THE DEPTH BETWEEN TRIPPED SURFACE AND EARTHWORKS SURFACE. STRIPPED SURFACE IS ASSUMED 300MM BELOW EXISTING SURFACE
- APPROVAL OF THE ENGINEERING PLANS REQUIRED BEFORE THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE

CONSTRUCTION ISSUE	LAPAF	MARSHAL	BAROLO	BAROLO	BAROLO
REV	CONSTRUCTION APPROVED	DATE	APPROVED	APPROVED	APPROVED
	LAPAF 24/6/21		G.ROMANZ		



HUME CITY COUNCIL  
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM  
BULK EARTHWORKS ISOPACH PLAN  
CONSTRUCTION 366 F1 RELEASE NO: 17040-54 DRAWN BY EW301 REV: 0

PROJECT: Merrifield Estate – Section D – Stage 54 (Level 1)	CLIENT: BMD Urban	DATE: 08/07/2023	A&Y ASSOCIATES GEOTECHNICAL ENGINEERING CONSULTANTS
LOCATION: Mickleham	PROJECT No: 1120 0428-1 (SI08)	SITE PLAN SKETCH—NOT TO SCALE	

# Field Density Test Results

## AS1289.5.7.1

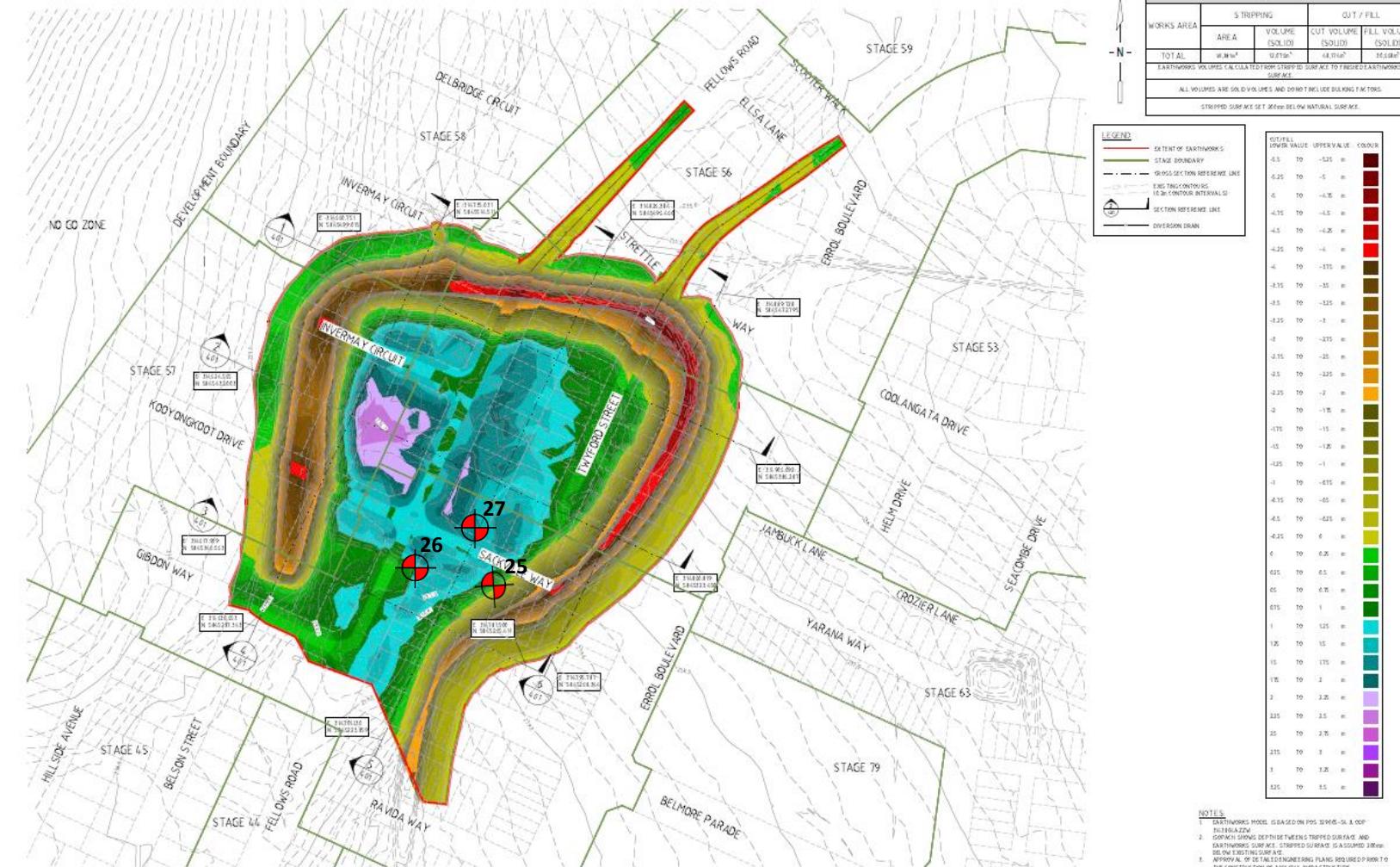
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	9			
<b>Location:</b>	Mickleham							
Sample No	25	26	27					
Date Tested	10/07/2023	10/07/2023	10/07/2023					
Time Tested	PM	PM	PM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	4	5	2					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.88	1.91					
Field Moisture Content	%	24.4	25.3					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	3.1	2.7					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	1.96	1.97					
Optimum Moisture Content	%	23	23.5					
<b>Moisture Ratio</b>	%	106	107.5					
<b>Moisture Variation from OMC</b>	%	1.5	2.0					
<b>Density Ratio</b>	%	Wetter	Wetter					
		95.0	97.0					
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI09)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 17/08/2023								





## Test Location



				NAME J. BARCELO
				ADDRESS J. BARCELO
				PHONE LAPAP
2 CONSTRUCTION ISSUE	LAPAP	DATE APPROVED 04/01/21	G. ROMANZ	
REV DESCRIPTION	APPROVED	DATE		

H 1:1000 0 10 20 40 60 80 100  
 A1



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D BULK EARTHWORKS  
STAGE 54 ISOPACH PLAN  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S108)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	10
<b>Location:</b>	Mickleham				
Sample No	28	29	30		
Date Tested	11/07/2023	11/07/2023	11/07/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	3	2	1		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.95	1.92		
Field Moisture Content	%	22.3	23.1		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.03	1.98		
Optimum Moisture Content	%	23	21		
<b>Moisture Ratio</b>	%	97	110	99	
<b>Moisture Variation from OMC</b>	%	-1.0	2.0	0.0	
<b>Density Ratio</b>	%	Drier	Wetter	OMC	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI10)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	17/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p>NATA Accredited Laboratory No. 20172 Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns 17/08/2023</p> </div> </div>					





## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HUME CITY COUNCIL	RECEIVED MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	366 F1 17040-54	EW301 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1130 0438 1 (SI10)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

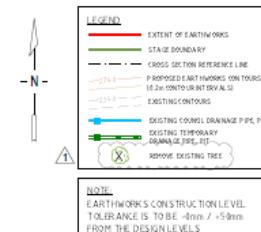
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

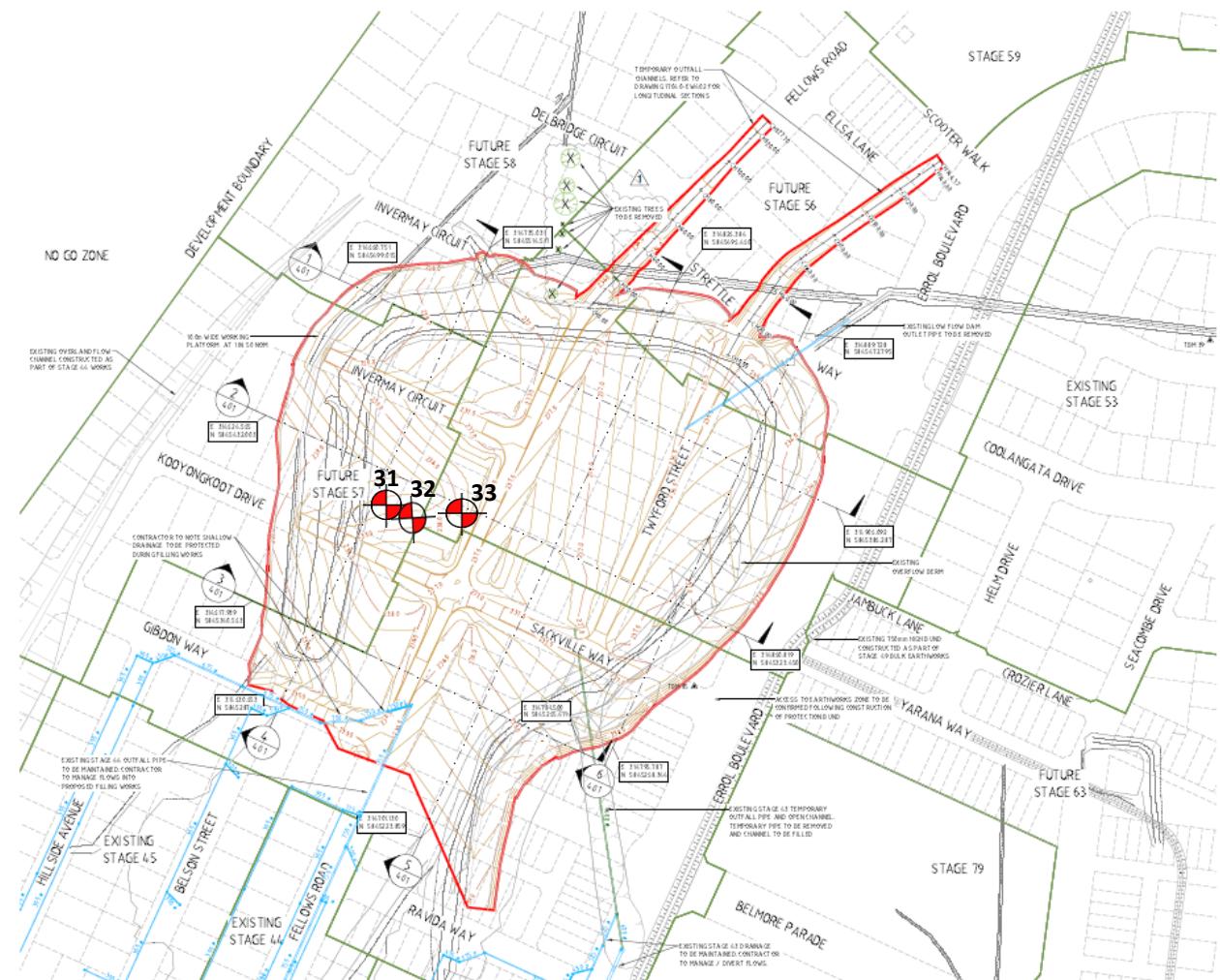
<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	11			
<b>Location:</b>	Mickleham							
Sample No	31	32	33					
Date Tested	12/07/2023	12/07/2023	12/07/2023					
Time Tested	PM	PM	PM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	4	4	5					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.95	1.94					
Field Moisture Content	%	21.9	22.8					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	2.03	1.97					
Optimum Moisture Content	%	20.5	21					
<b>Moisture Ratio</b>	%	107	108.5					
<b>Moisture Variation from OMC</b>	%	1.5	2.0	-0.5				
<b>Density Ratio</b>	%	Wetter	Wetter	Drier				
		96.0	98.5	97.0				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI11)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <small>NATA ACCREDITED LABORATORY NO. 20172</small> <small>ACCREDITATION FOR COMPLIANCE WITH ISO/IEC 17025 - TESTING</small>								
<small>Approved Signatory:</small>  David Burns Date: 17/08/2023								



Test Location



- NOTES:**
1. FOR THE POINTS ON THIS INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS LAYOUT PLAN, JAC 2012.
  2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS ACTIVITIES.
  3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

@ A1

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3154  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

**CONSTRUCTION**

BULK EARTHWORKS  
LAYOUT PLAN

REF: 366 F1 | INC: 17040-54 | EW201 | 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
12/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI11)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



# Field Density Test Results

## AS1289.5.7.1

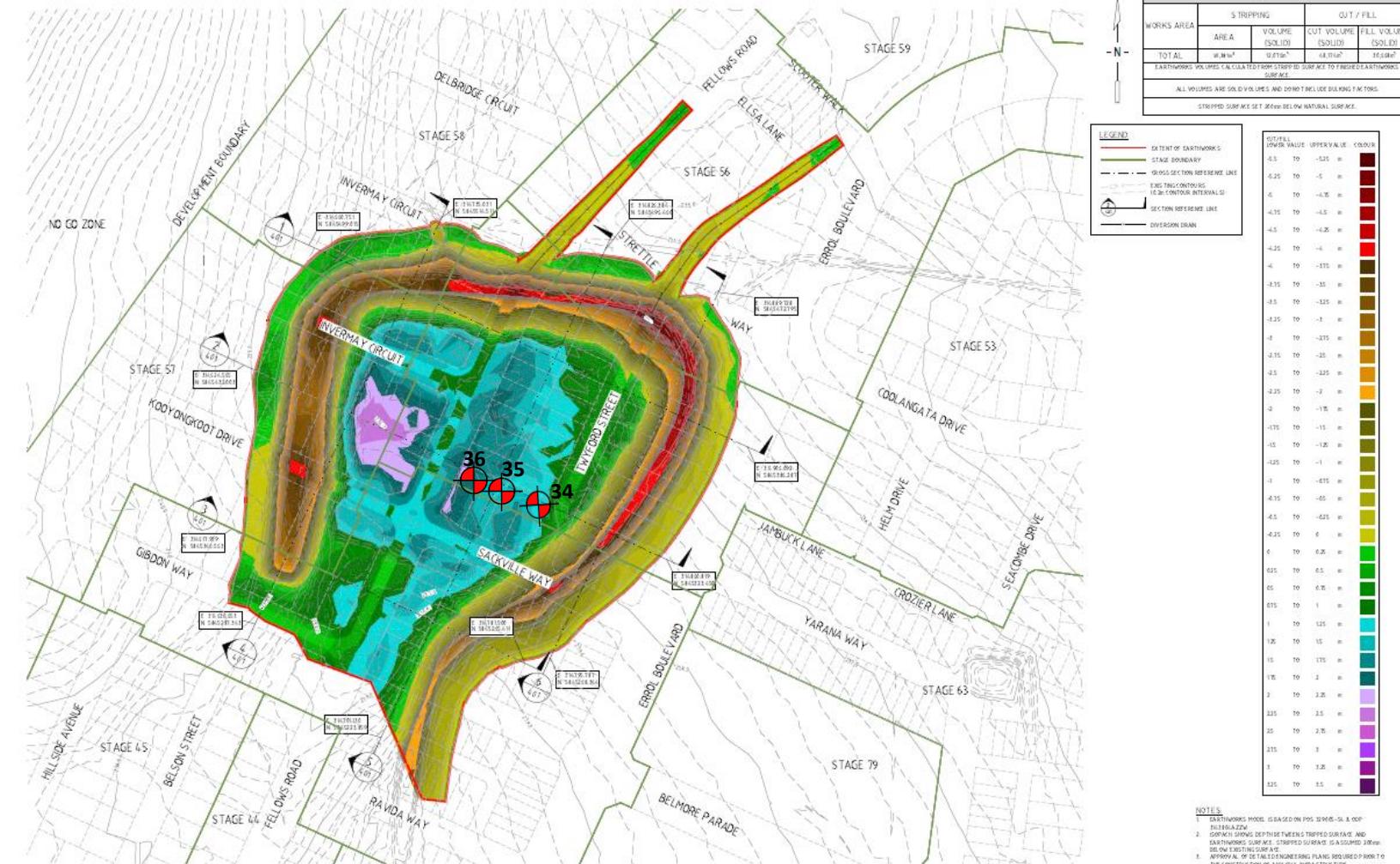
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	12
<b>Location:</b>	Mickleham				
Sample No	34	35	36		
Date Tested	13/07/2023	13/07/2023	13/07/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		6	6	6	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.94	1.99	1.89	
Field Moisture Content	%	22.8	21.8	23.8	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	2.06	1.97	
Optimum Moisture Content	%	23.5	22.5	24	
<b>Moisture Ratio</b>	%	97	97	99	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		96.0	97.0	96.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI12)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
 David Burns Date: 21/08/2023					





## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



100-0074-001-A10

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**CONSTRUCTION**      366 F1      17040-54      EW301      0

**NOTES:**

- EARTHWORKS MODEL IS BASED ON POS 1190E5-SL & OOF TINING/BLAZIN
- DEPTH SHOWS DEPTH BETWEEN STRIPPED SURFACE AND EARTHWORKS SURFACE. STRIPPED SURFACE IS ASSUMED 10mm BELOW EXISTING SURFACE.
- APPROVAL OF DETAILED ENGINEERING PLANS REQUIRED P 00981 TO THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE.

**PROJECT:** Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
13/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (SI12)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

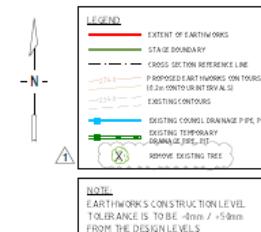
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	13
<b>Location:</b>	Mickleham				
Sample No	37	38	39		
Date Tested	14/07/2023	14/07/2023	14/07/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	7	7	8		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	2.02	1.90		
Field Moisture Content	%	21.0	24.3		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.08	1.98		
Optimum Moisture Content	%	22	22.5		
<b>Moisture Ratio</b>	%	95.5	108		
<b>Moisture Variation from OMC</b>	%	-1.0	2.0		
<b>Density Ratio</b>	%	Drier	Wetter		
		97.0	96.0		
		96.5			
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI13)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	21/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					

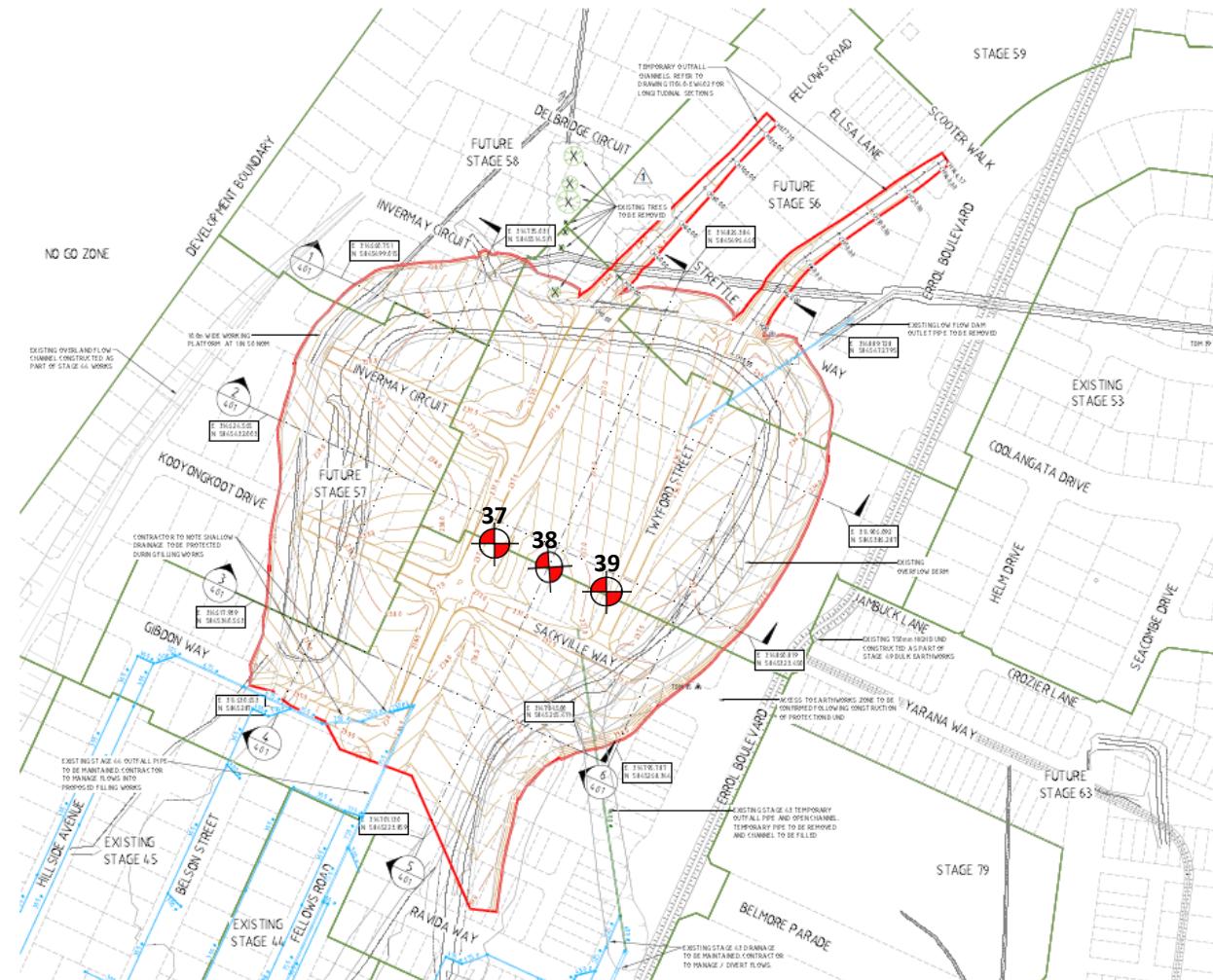


Test Location



**NOTES:**

- FOR THE POINTS IDENTIFIED, INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS LAYOUT PLAN, JAC 2012.
- CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS.
- ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	10/07/23
2. CONSTRUCTION ISSUE:	LAPAP	24/04/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 30 40 50 60 70

A1

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Maitland East VIC 3142  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

366 F1

17040-54

EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
14/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI13)

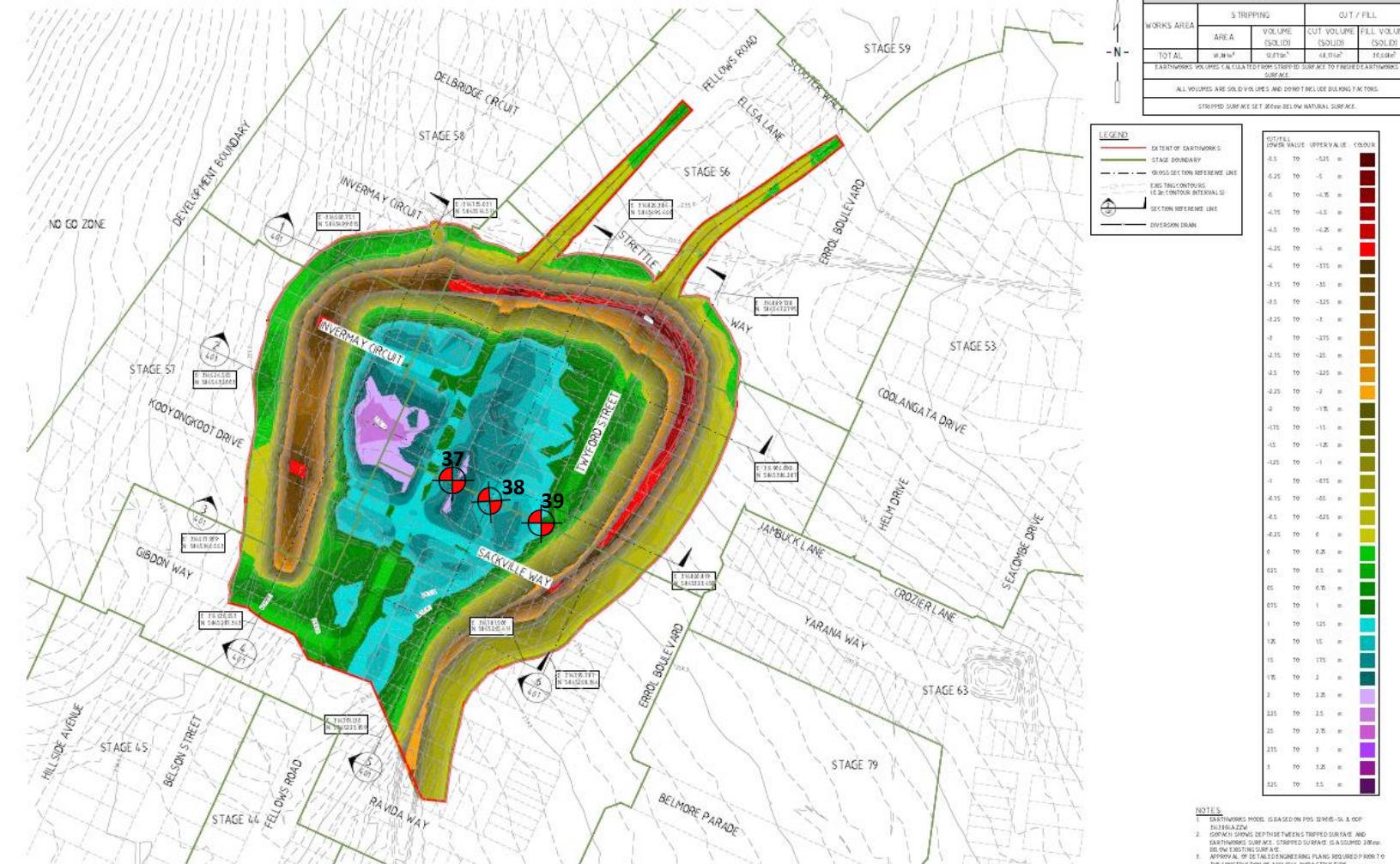
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	RECEIVED MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	366 F1 17040-54	EW301 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SI13)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

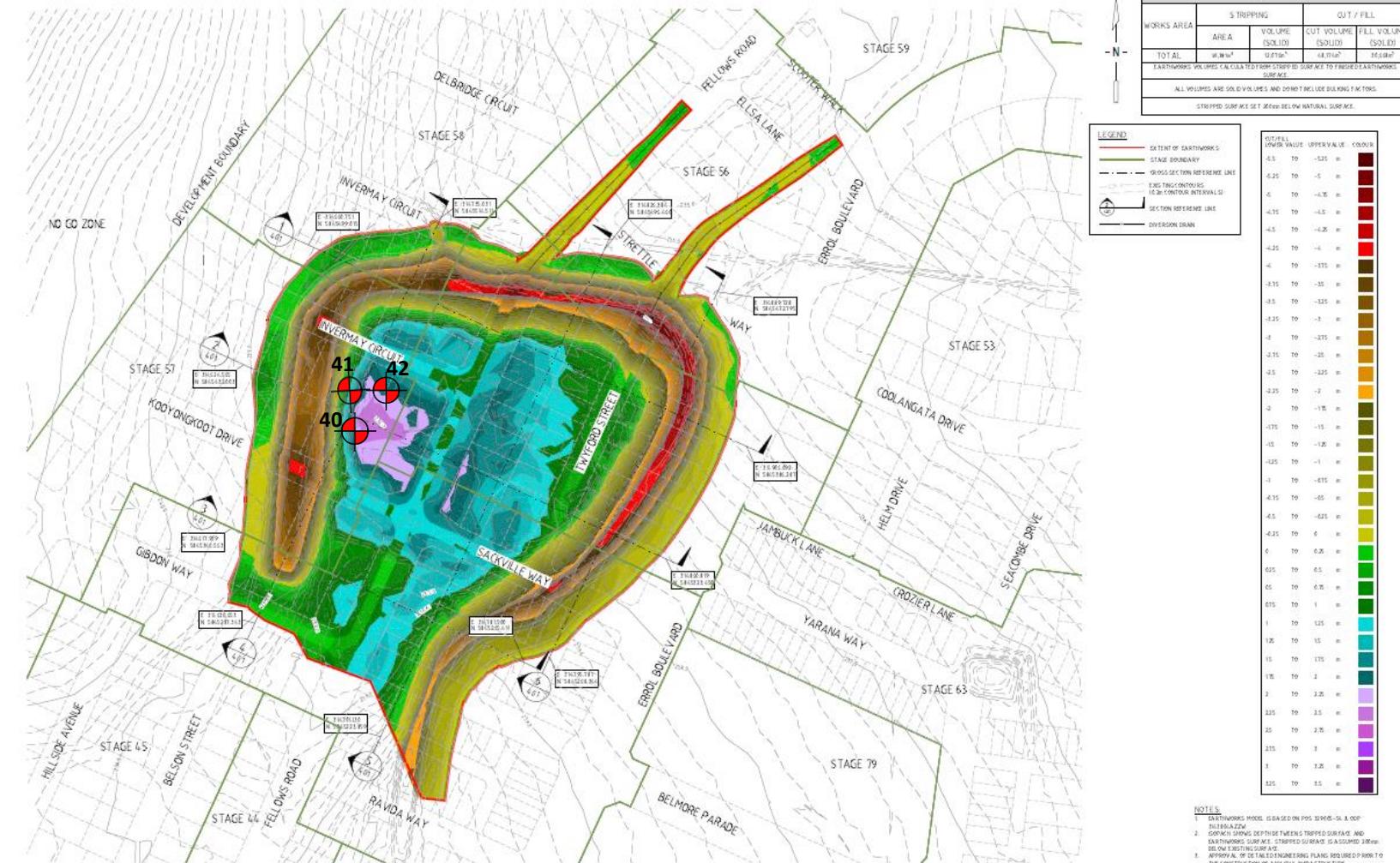
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	14
<b>Location:</b>	Mickleham				
Sample No	40	41	42		
Date Tested	17/07/2023	17/07/2023	17/07/2023		
Time Tested	AM	AM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	1	2	3		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	2.01	2.10	1.91	
Field Moisture Content	%	21.4	20.8	22.6	
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.06	2.13	1.98	
Optimum Moisture Content	%	22	21.5	23	
<b>Moisture Ratio</b>	%	97.5	96.5	98	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		97.5	98.5	96.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI14)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	21/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p><b>NATA Accredited Laboratory No. 20172</b> Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns 21/08/2023</p> </div> </div>					





## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	RECEIVED MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	366 F1 17040-54	EW301 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SI14)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

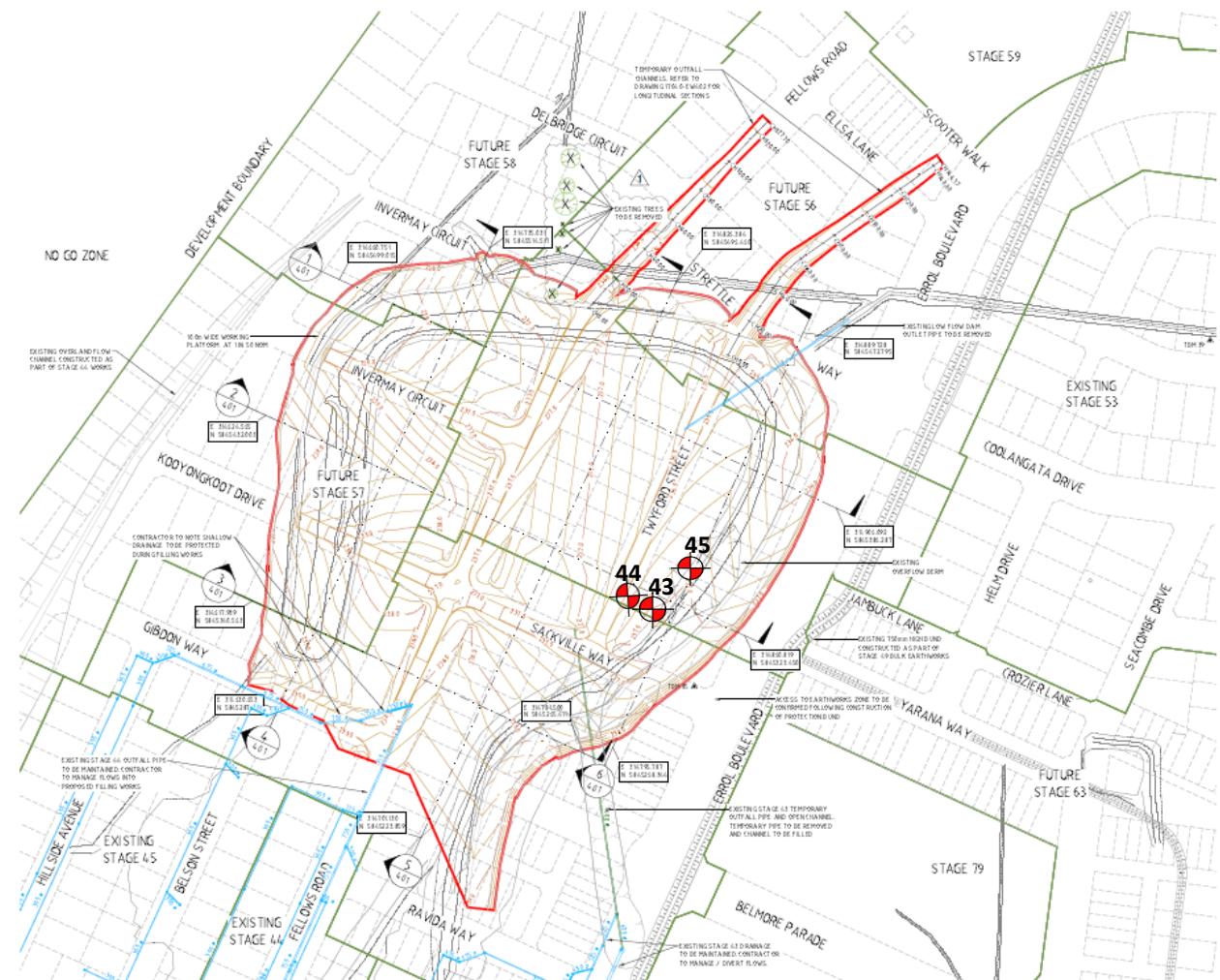
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	15
<b>Location:</b>	Mickleham				
Sample No	43	44	45		
Date Tested	18/07/2023	18/07/2023	18/07/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		5	5	5	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.94	1.89	1.99	
Field Moisture Content	%	21.8	23.8	20.7	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.01	1.97	2.05	
Optimum Moisture Content	%	22.5	24	21	
<b>Moisture Ratio</b>	%	97	99	98.5	
<b>Moisture Variation from OMC</b>	%	-1.0	0.0	-0.5	
<b>Density Ratio</b>	%	Drier	OMC	Drier	
		96.5	96.0	97.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI15)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	21/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p><b>NATA Accredited Laboratory No. 20172</b> Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns 21/08/2023</p> </div> </div>					



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3154  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
18/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI15)

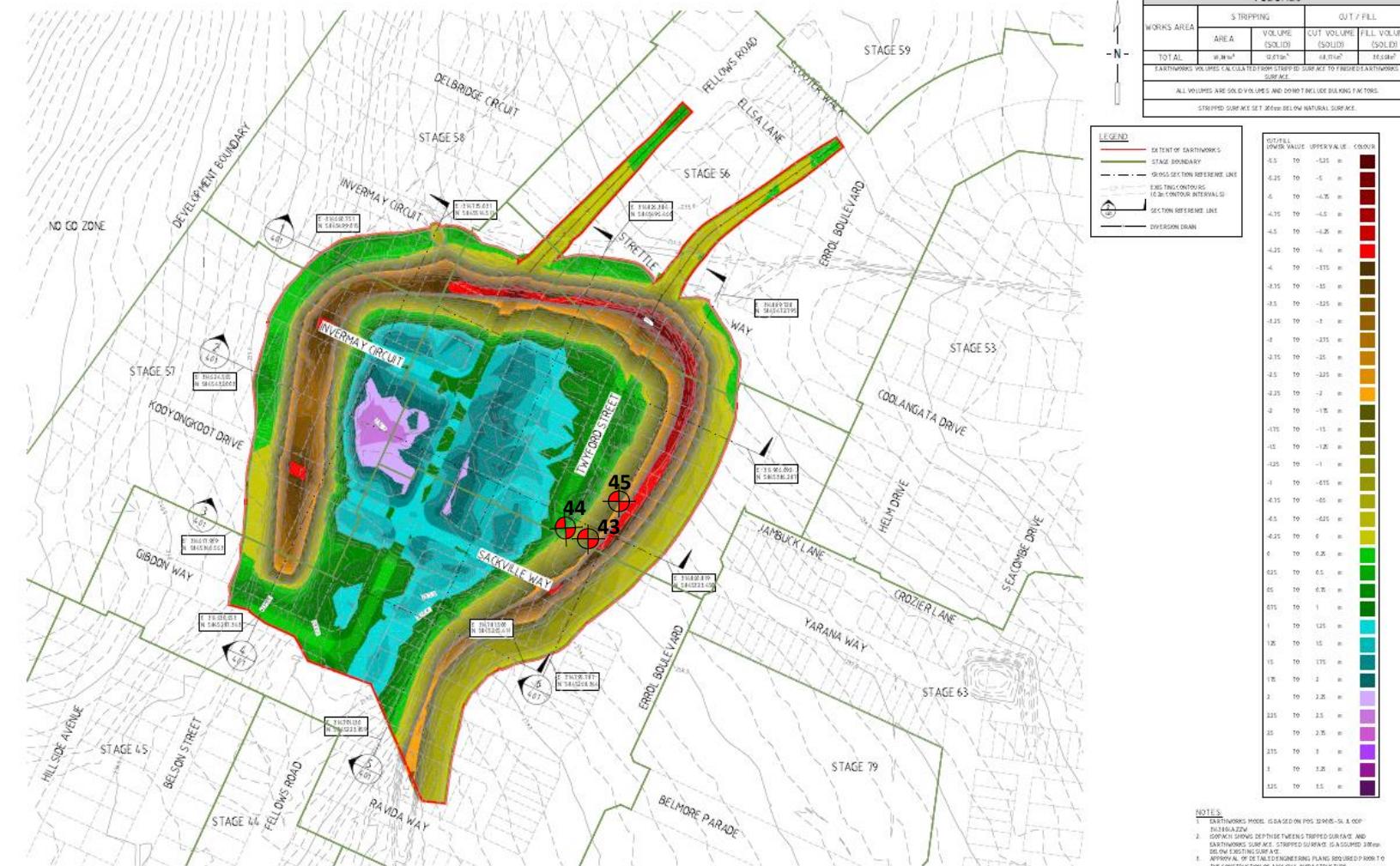
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUKE CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
18/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (SI1E)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

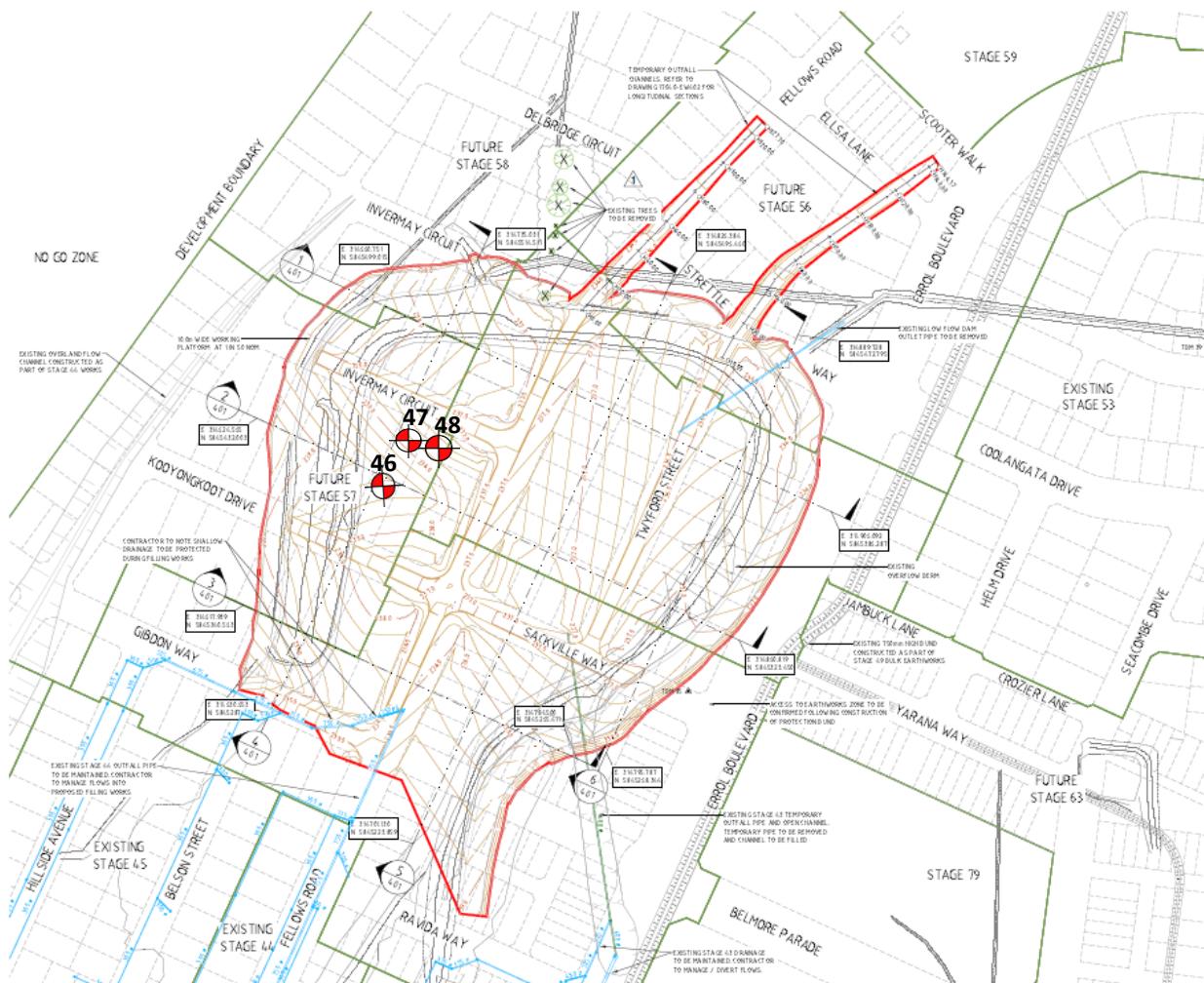
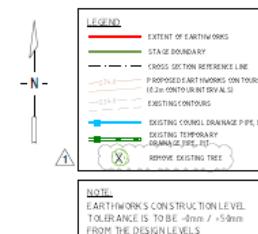
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	16
<b>Location:</b>	Mickleham				
Sample No	46	47	48		
Date Tested	19/07/2023	19/07/2023	19/07/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	4	4	5		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.89	1.89		
Field Moisture Content	%	23.3	23.6		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	1.97	1.97		
Optimum Moisture Content	%	23.5	24		
<b>Moisture Ratio</b>	%	99	98.5		
<b>Moisture Variation from OMC</b>	%	0.0	-0.5		
<b>Density Ratio</b>	%	OMC	Drier		
		96.0	96.0		
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI16)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	21/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					

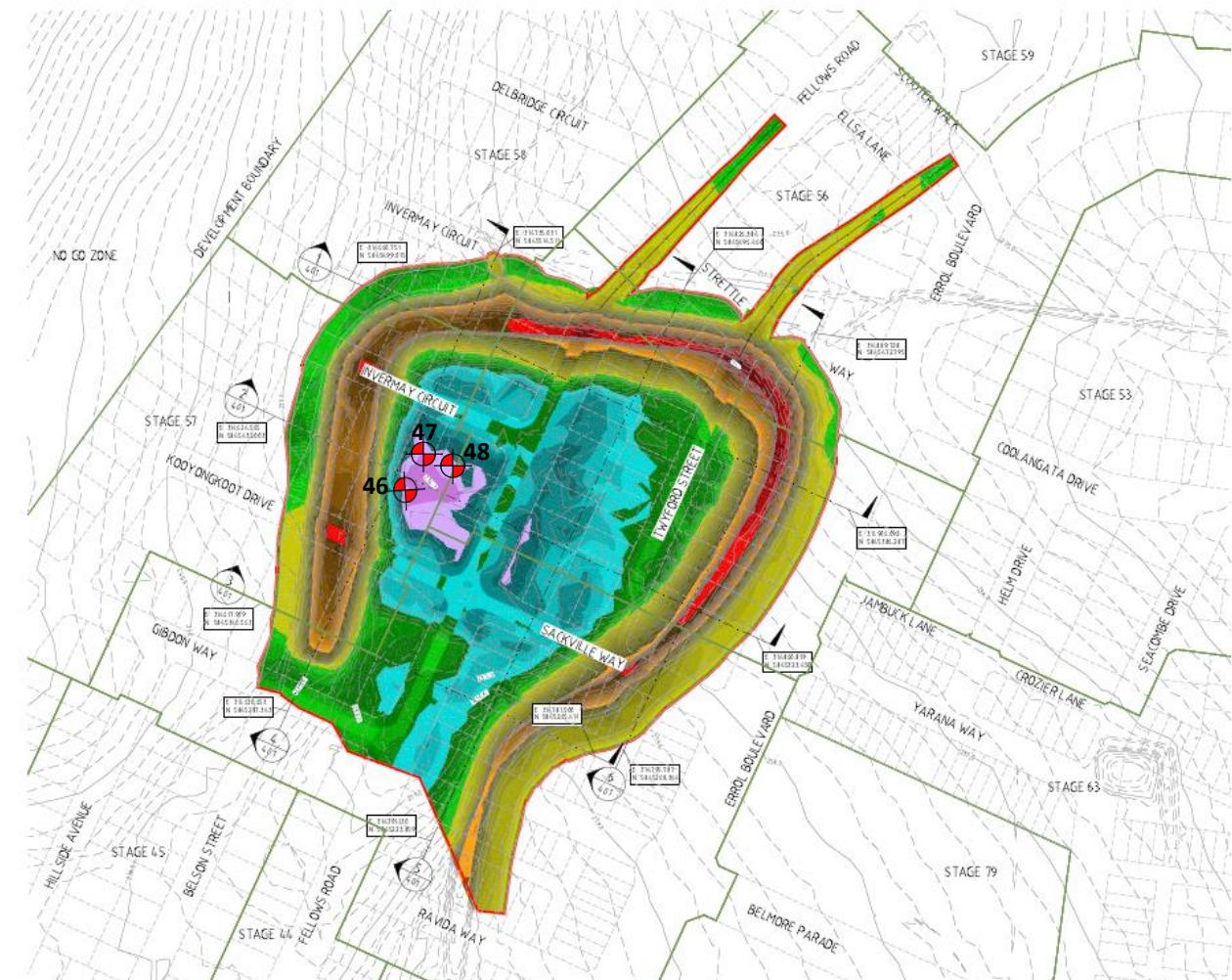


Test Location





Test Location



WORKS AREA	VOLUMES		CUT / FILL
	STRIPPING	CUT VOLUME	
TOTAL	AREA (m²)	VOLUME (m³)	CUT VOLUME (m³)
EARTHWORKS VOLUMES CALCULATED FROM STRIPPED SURFACE TO FINISHED EARTHWORKS SURFACE			
ALL VOLUMES ARE SOLID VOLUMES AND DO NOT INCLUDE BULKING FACTORS			
STRIPPED SURFACE SET 300mm BELOW NATURAL SURFACE			

LEGEND

- EXTENT OF EARTHWORKS
- STAGE BOUNDARY
- GROSS SECTION REFERENCE LINE
- EXISTING CONTURS (10cm CONTOUR INTERVALS)
- SECTION REFERENCE LINE
- DIVISION DRAIN

LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	
-4.25	-5	
-4	-4.5	
-4.25	-4.5	
-4.5	-4.25	
-4.25	-4	
-4	-3.75	
-3.75	-3.5	
-3.5	-3.25	
-3.25	-3	
-3	-2.75	
-2.75	-2.5	
-2.5	-2.25	
-2.25	-2	
-2	-1.75	
-1.75	-1.5	
-1.5	-1.25	
-1.25	-1	
-1	-0.75	
-0.75	-0.5	
-0.5	-0.25	
-0.25	0	
0	0.25	
0.25	0.5	
0.5	0.75	
0.75	1	
1	1.25	
1.25	1.5	
1.5	1.75	
1.75	2	
2	2.25	
2.25	2.5	
2.5	2.75	
2.75	3	
3	3.25	
3.25	3.5	

NOTES:

- EARTHWORKS MODEL IS BASED ON POS 12400-50 & 00P-12400-50Z
- DEPTH IS MEASURED BETWEEN TRIPPED SURFACE AND EXISTING SURFACE. STRIPPED SURFACE IS ASSUMED 300mm BELOW EXISTING SURFACE.
- APPROVAL OF THE ENGINEERING PLANS REQUIRED BEFORE THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE.

CONSTRUCTION ISSUE	LAPAF	MAB	GPC
REV	DESCRIPTION	APPROVED	DATE
		J.BARCEO	
		J.BARCEO	
		LAPAF	
		G.ROMANZ	

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 31545  
TEL: 03 8273 1500 verveprojects.com  
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HUME CITY COUNCIL  
PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM  
CONSTRUCTION  
REF ID: 366 F1  
REF ID: 17040-54  
REF ID: EW301  
REF ID: 0

PROJECT:  
Merrifield Estate – Section D – Stage 54 (Level 1)

CLIENT:  
BMD Urban

DATE:  
19/07/2023

LOCATION:  
Mickleham

PROJECT No:  
1120 0428-1 (SI16)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	17
<b>Location:</b>	Mickleham				
Sample No	49	50	51		
Date Tested	20/07/2023	20/07/2023	20/07/2023		
Time Tested	AM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		1	1	2	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.97	1.96	1.91	
Field Moisture Content	%	23.8	23.4	23.5	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.04	2.03	2.00	
Optimum Moisture Content	%	24	24	24	
<b>Moisture Ratio</b>	%	99	97.5	98	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		96.5	96.5	95.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI17)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns Date: 21/08/2023					





## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUKE CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
20/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SI17)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

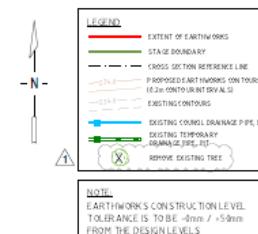
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	18
<b>Location:</b>	Mickleham				
Sample No	52	53	54		
Date Tested	21/07/2023	21/07/2023	21/07/2023		
Time Tested	AM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		9	10	10	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.91	1.86	1.89	
Field Moisture Content	%	22.1	24.2	23.3	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.97	1.94	1.96	
Optimum Moisture Content	%	23	22.5	23.5	
<b>Moisture Ratio</b>	%	96	107.5	99	
<b>Moisture Variation from OMC</b>	%	-0.5	1.5	0.0	
<b>Density Ratio</b>	%	Drier	Wetter	OMC	
		97.0	96.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI18)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>Date:</span> <span>David Burns</span> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span></span> <span>21/08/2023</span> </div>					

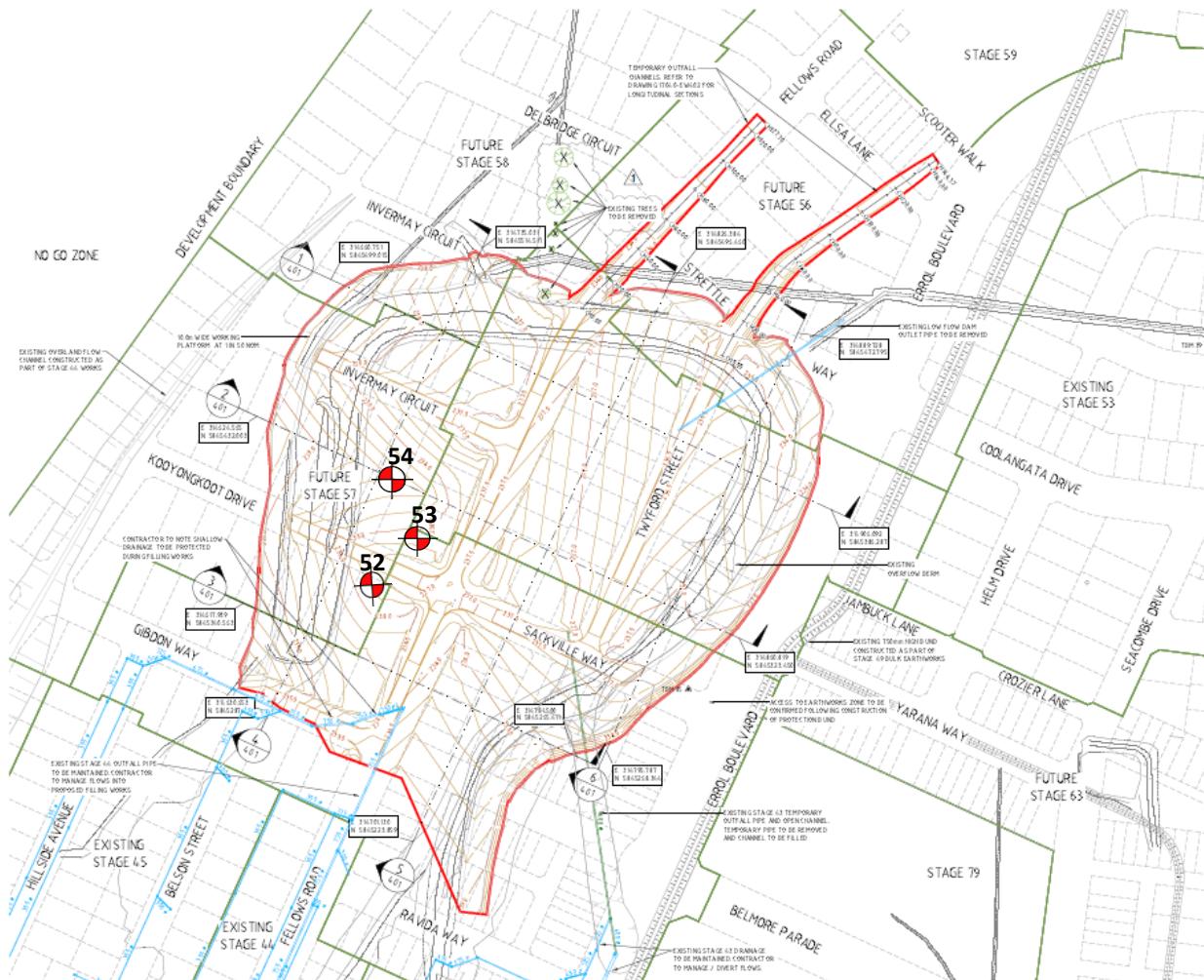


Test Location



**NOTES:**

1. FOR THE POINTS ON THIS INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS LAYOUT PLAN, JAC 2012.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING CONSTRUCTION AND REMOVE AS PER CONTRACT.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	110-01-21
2. CONSTRUCTION ISSUE:	LAPAP	110-02-21
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

A1

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3144  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL  
**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**  
**BULK EARTHWORKS LAYOUT PLAN**  
**CONSTRUCTION** 366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
21/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI18)

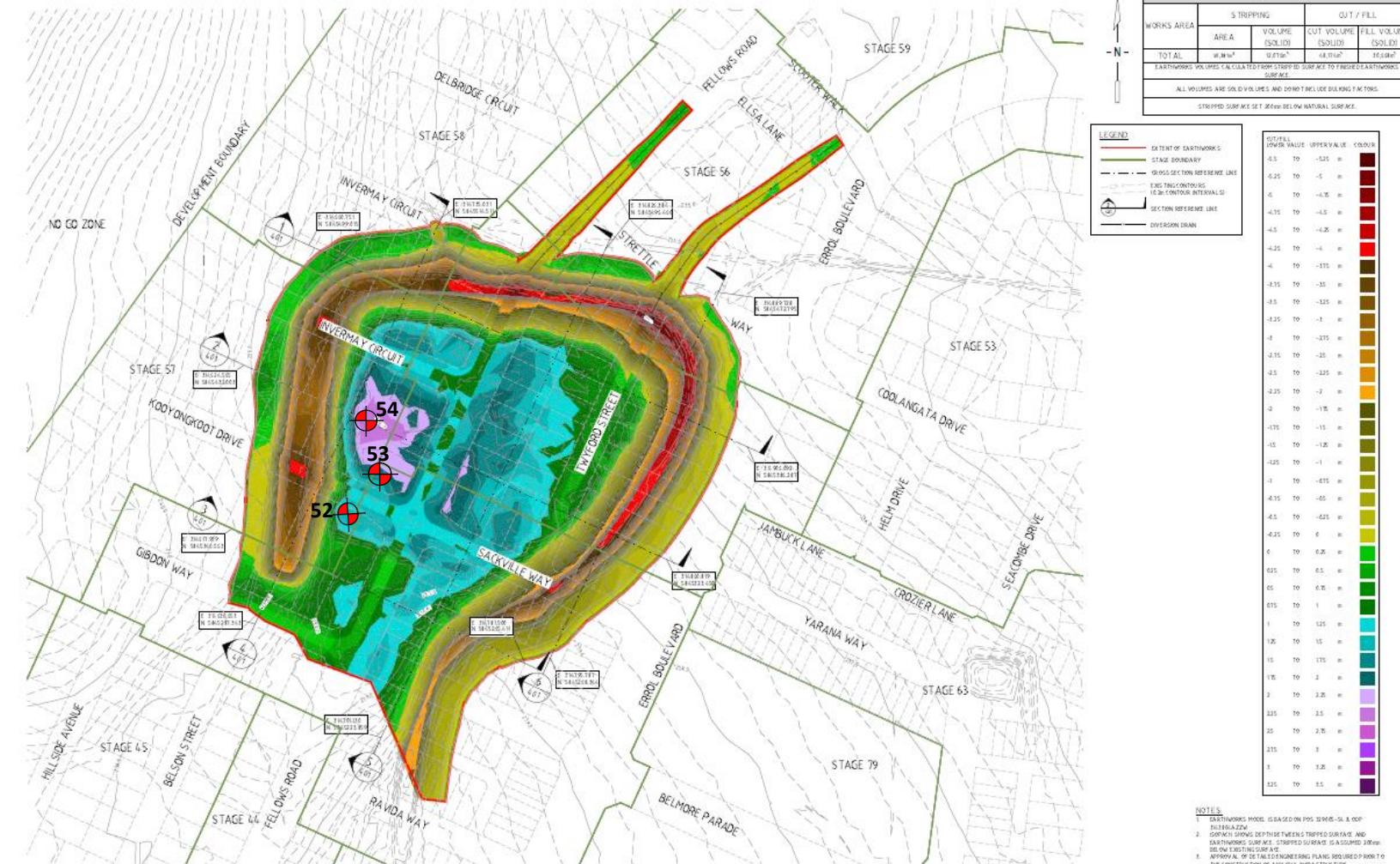
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
<b>CONSTRUCTION</b>	BULK EARTHWORKS ISOPACH PLAN
366 F1	17040-54
EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SI18)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

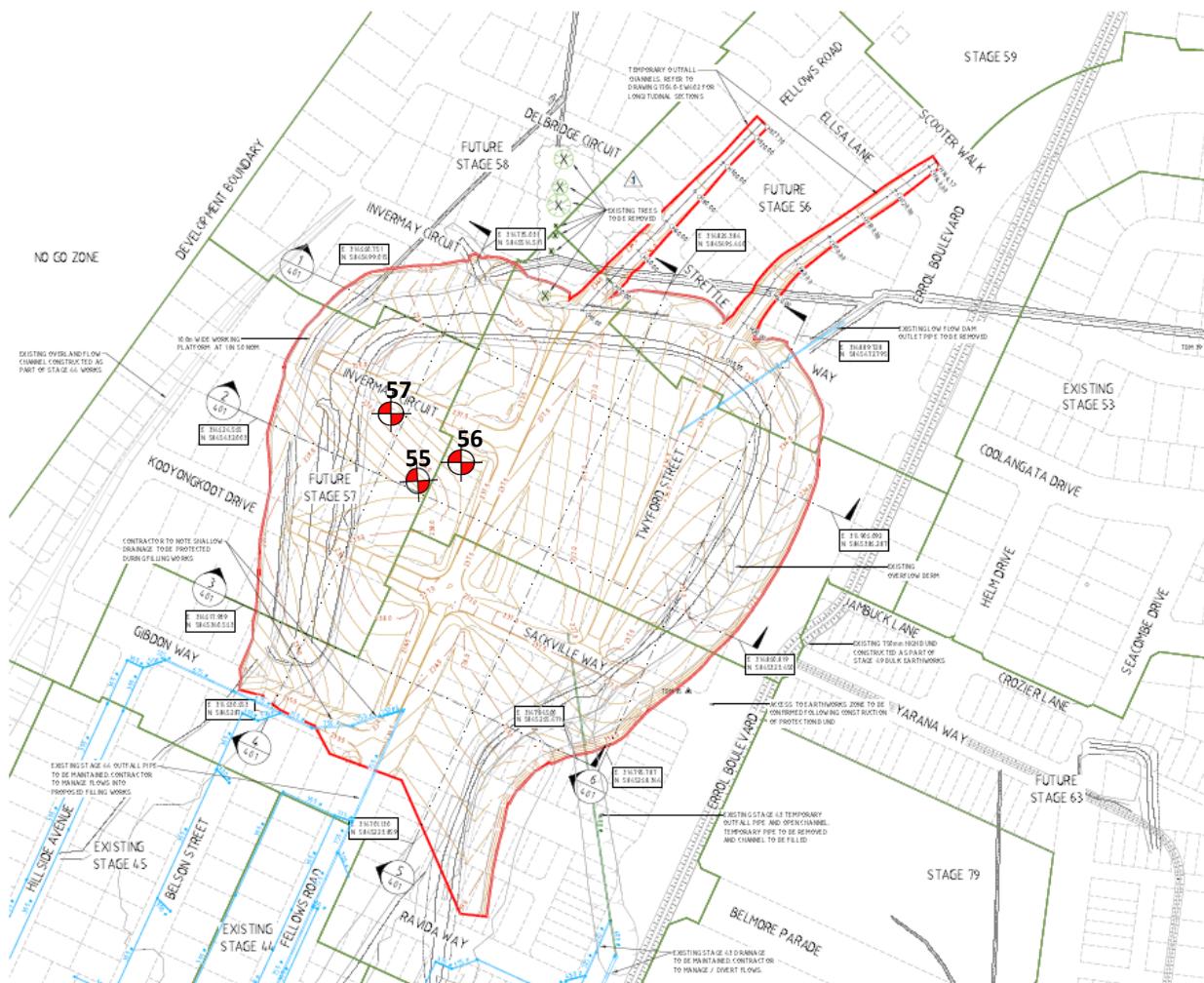
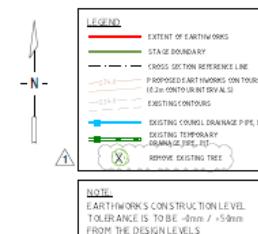
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	19
<b>Location:</b>	Mickleham				
Sample No	55	56	57		
Date Tested	24/07/2023	24/07/2023	24/07/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		11	11	12	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.98	1.96	1.97	
Field Moisture Content	%	21.8	23.0	22.6	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.04	2.04	2.04	
Optimum Moisture Content	%	22.5	23.5	23	
<b>Moisture Ratio</b>	%	97	98	98	
<b>Moisture Variation from OMC</b>	%	-1.0	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		97.0	96.5	96.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI19)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>			<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small> <small>Approved Signatory:</small>  David Burns <small>Date:</small> 21/08/2023		



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

366 F1

17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
24/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI19)

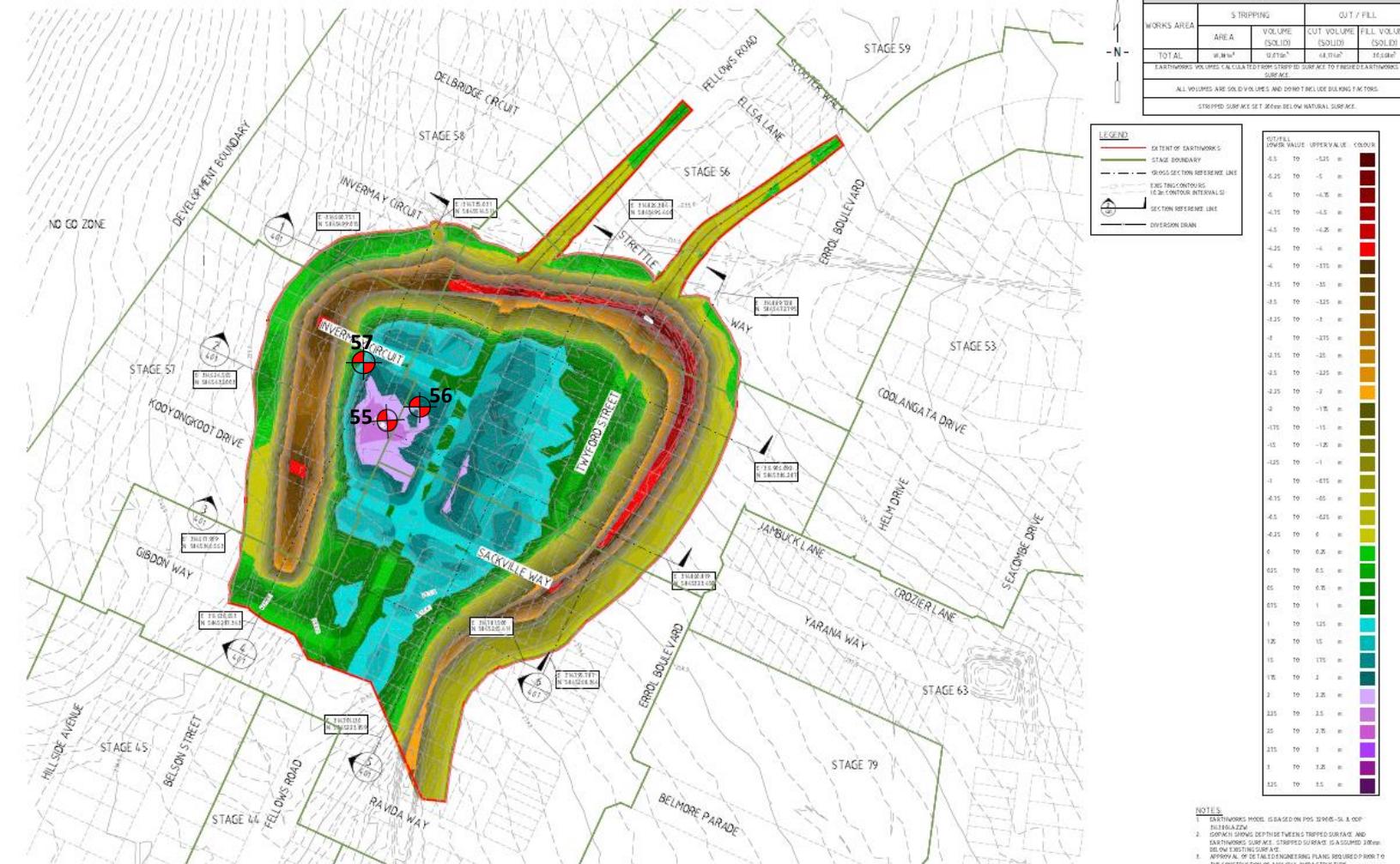
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	REQUEST REF: 366 F1 REQUEST NO: 17040-54 EW301 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

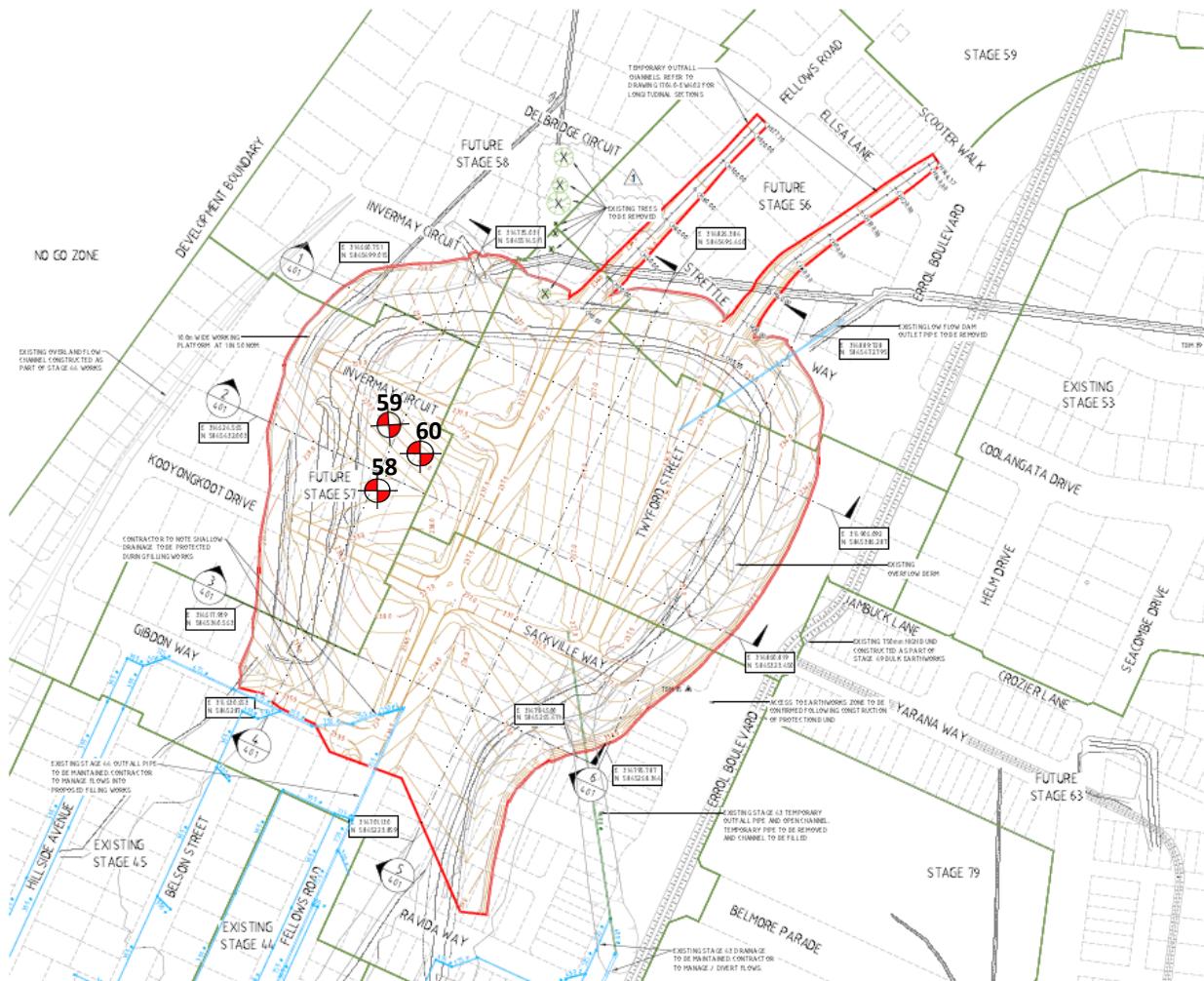
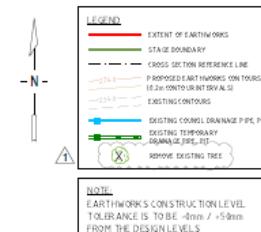
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	20
<b>Location:</b>	Mickleham				
Sample No	58	59	60		
Date Tested	25/07/2023	25/07/2023	25/07/2023		
Time Tested	AM	AM	AM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		13	13	13	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.88	1.90	1.98	
Field Moisture Content	%	23.3	22.8	21.7	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.97	1.98	2.04	
Optimum Moisture Content	%	23.5	23.5	22.5	
<b>Moisture Ratio</b>	%	99	97	96.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-1.0	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		95.5	96.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI20)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns Date: 21/08/2023					



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

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Malvern East VIC 3154  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

366 F1

17040-54

EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
25/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI20)

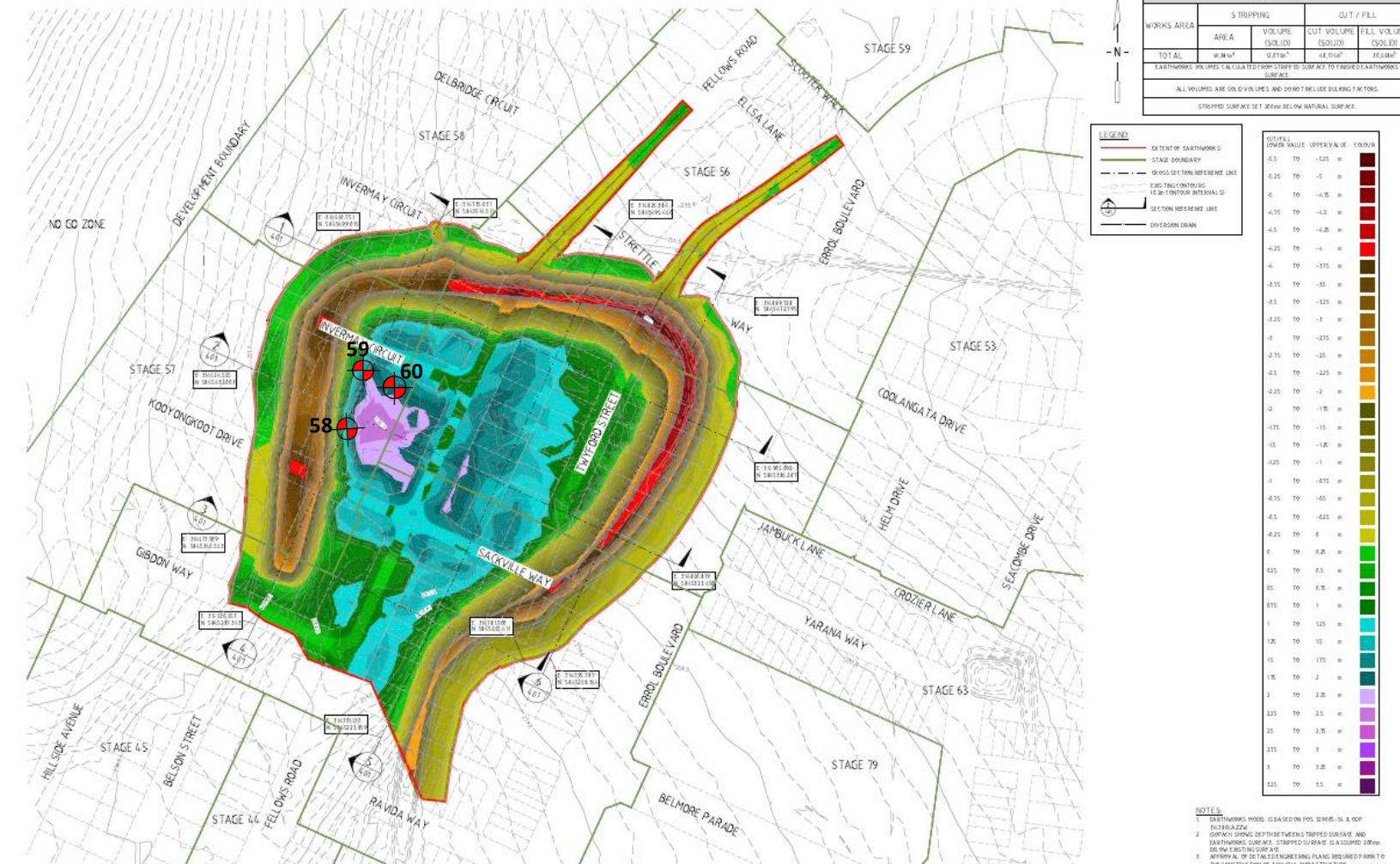
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	REQUEST REF: 366 F1 REQUEST NO: 17040-54 EW301 0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
25/07/2023

**LOCATION:**

**PROJECT No:**  
**1130 0438 1 (S130)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

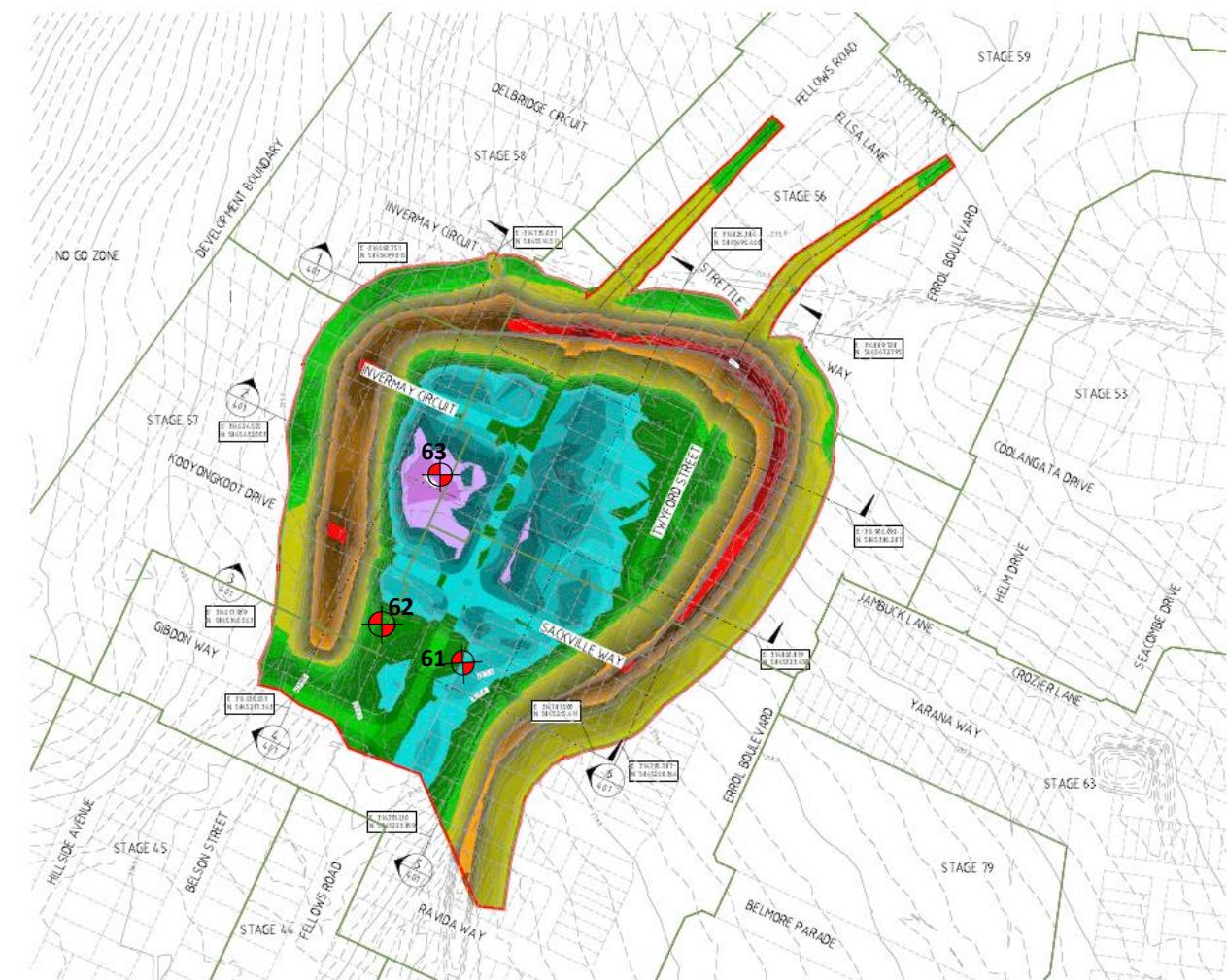
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	21
<b>Location:</b>	Mickleham				
Sample No	61	62	63		
Date Tested	26/07/2023	26/07/2023	26/07/2023		
Time Tested	AM	AM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		10	10	14	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.98	1.92	1.87	
Field Moisture Content	%	22.0	22.8	23.3	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.03	2.00	1.94	
Optimum Moisture Content	%	22.5	23	24	
<b>Moisture Ratio</b>	%	98	99	97	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		97.5	96.5	96.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI21)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
 David Burns Date: 21/08/2023					





Test Location



LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	Black
-4.25	-5	Dark Red
-4	-4.25	Red
-3.75	-4.25	Dark Brown
-3.5	-4	Brown
-3.25	-3.5	Dark Olive Green
-3	-3.25	Olive Green
-2.75	-3	Light Green
-2.5	-2.75	Yellow
-2.25	-2.5	Light Yellow
-2	-2.25	Orange
-1.75	-2	Dark Orange
-1.5	-1.75	Dark Grey
-1.25	-1.5	Grey
-1	-1.25	Light Grey
-0.75	-1	Very Light Grey
-0.5	-0.75	White
0	-0.5	Light Blue
0.25	0	Medium Blue
0.5	0.25	Dark Blue
1	0.5	Purple
1.25	1	Dark Purple
1.5	1.25	Very Dark Purple
1.75	1.5	Black
2	1.75	Very Dark Purple
2.25	2	Dark Purple
2.5	2.25	Medium Blue
2.75	2.5	Light Blue
3	2.75	White
3.25	3	Light Blue

CONSTRUCTION ISSUE	LAPAF	APPROVED	DATE	BAROLO	
				REVISION	REVISION
REV 1	LAPAF 1241-21	APPROVED	G.ROMANZ		
				H 1:1000	10 20 40 60 80
				A1	



HUME CITY COUNCIL		BULK EARTHWORKS ISOPACH PLAN	
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		CONSTRUCTION	
REF: 366 F1	PROJECT NO: 17040-54	REV: EW301	ISSUE DATE: 0

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
26/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI21)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

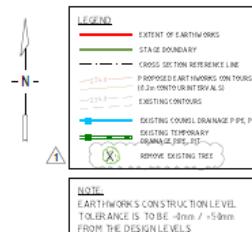
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	22
<b>Location:</b>	Mickleham				
Sample No	64	65	66		
Date Tested	27/07/2023	27/07/2023	27/07/2023		
Time Tested	AM	AM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		1	2	3	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.94	1.98	1.98	
Field Moisture Content	%	23.8	21.7	22.0	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	2.04	2.04	
Optimum Moisture Content	%	24	22	22.5	
<b>Moisture Ratio</b>	%	99	98.5	97.5	
<b>Moisture Variation from OMC</b>	%	0.0	-0.5	-0.5	
<b>Density Ratio</b>	%	OMC	Drier	Drier	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI22)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <p style="text-align: center;"><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p style="text-align: center;">NATA Accredited Laboratory No. 20172 Accreditation for compliance with ISO/IEC 17025 - Testing</p> <div style="text-align: right;">           David Burns          Date: 24/08/2023       </div>					

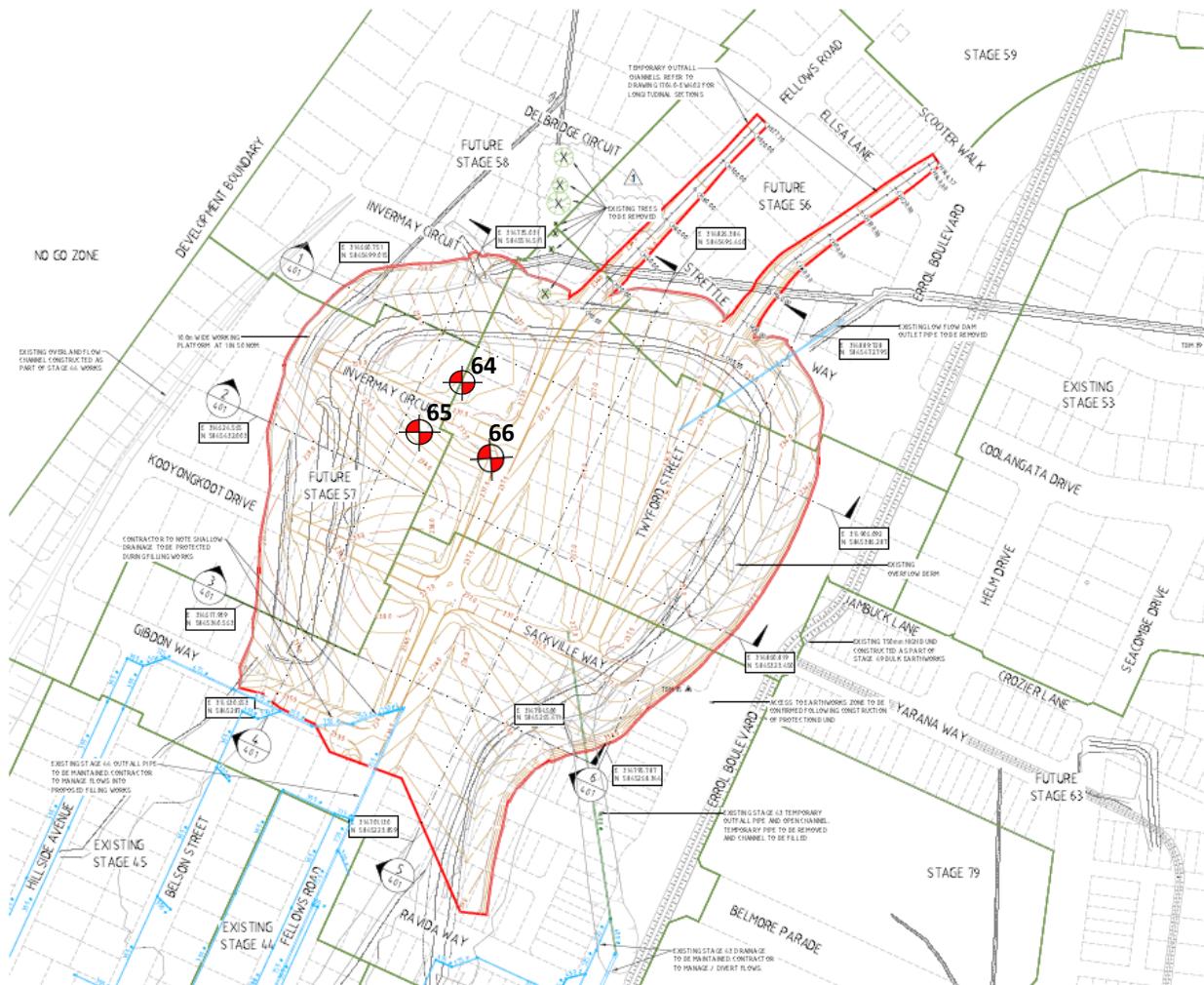


Test Location



NOTES:

1. FOR THE POINTS ON THIS INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS PLAN, JAC 2012.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING CONSTRUCTION AND REMOVE AS UNNECESSARY.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/06/23
2. CONSTRUCTION ISSUE:	LAPAP	2/06/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3144  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
27/07/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI22)

SITE PLAN SKETCH—NOT TO SCALE

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				REVISOR	
				J BARCELO	
				REVISOR	
				LAPAP	
2 CONSTRUCTION ISSUE	LLAPAP	EMAIL:21	APPROVED	G ROMANZC	
REV DESCRIPTION	APPROVED	DATE			



HUME CITY COUNCIL		PERMIT NO.		
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		BULK EARTHWORKS ISOPACH PLAN		
<b>CONSTRUCTION</b>	366 F1	17040-54	EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
27/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S122)**

SITE PLAN SKETCH=NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

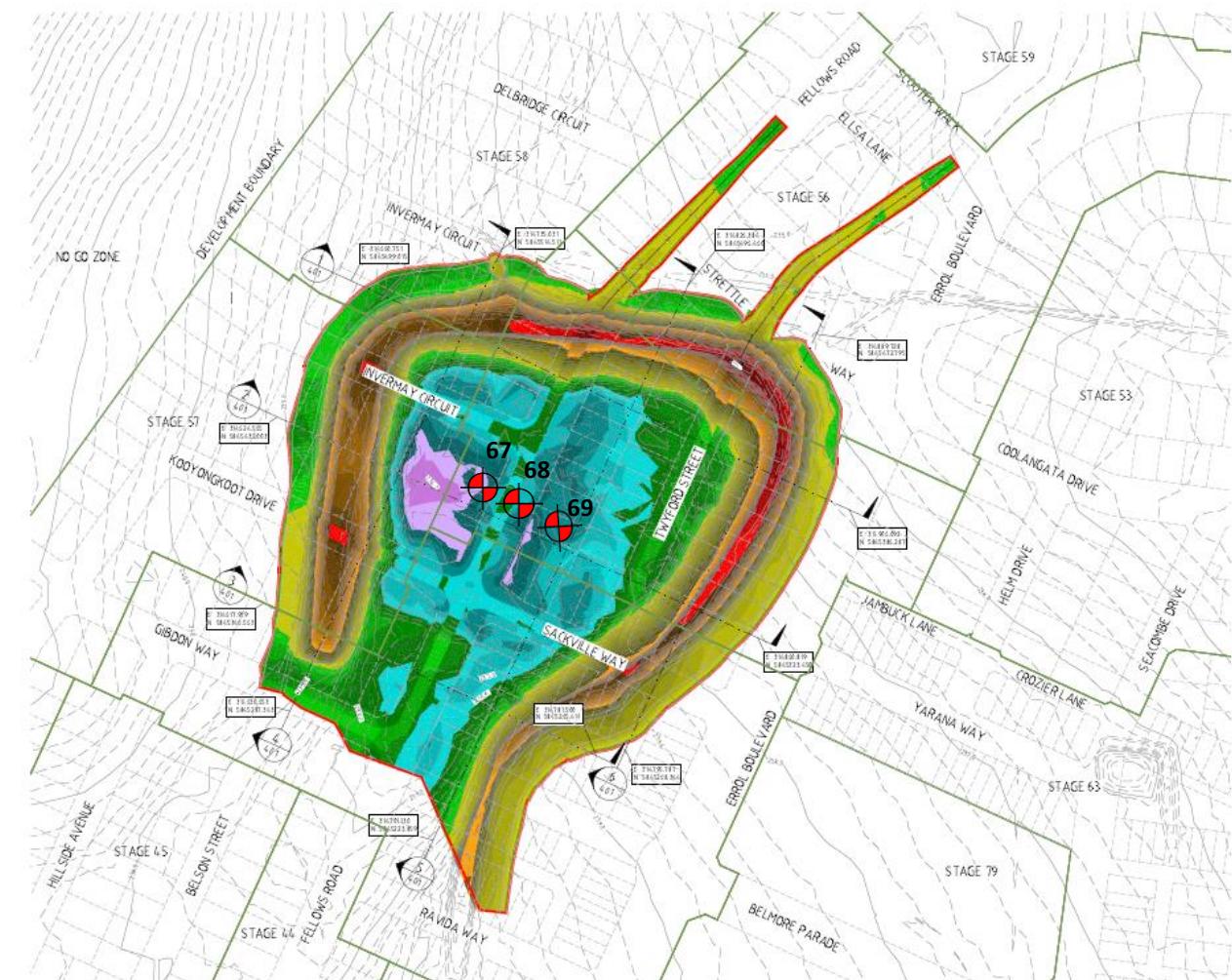
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	23
<b>Location:</b>	Mickleham				
Sample No	67	68	69		
Date Tested	28/07/2023	28/07/2023	28/07/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		3	3	3	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.90	1.99	1.85	
Field Moisture Content	%	21.8	21.0	23.7	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	4.6	5.2	2.1	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.96	2.02	1.90	
Optimum Moisture Content	%	20	21.5	22	
<b>Moisture Ratio</b>	%	109	97.5	107.5	
<b>Moisture Variation from OMC</b>	%	1.5	-0.5	2.0	
<b>Density Ratio</b>	%	Wetter	Drier	Wetter	
		96.0	98.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI23)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns Date: 31/07/2023					





Test Location



WORKS AREA	VOLUMES	
	STRIPPING	CUT / FILL
TOTAL	AREA: 9,116m <sup>2</sup>	CUT VOLUME: 14,116m <sup>3</sup>
EARTHWORKS VOLUMES CALCULATED FROM STRIPPED SURFACE TO FINISHED EARTHWORKS SURFACE		
ALL VOLUMES ARE SOLID VOLUMES AND DO NOT INCLUDE BULKING FACTORS		
STRIPPED SURFACE SET 300mm BELOW NATURAL SURFACE		

LEGEND

- EXTENT OF EARTHWORKS
- STAGE BOUNDARY
- GRIDS SECTION REFERENCE LINE
- EARTHWORKS CONTOURS (10cm CONTOUR INTERVALS)
- SECTION REFERENCE LINE
- DIVISION DRAIN

LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	
-4.25	-5	
-4	-4.5	
-4.25	-4.5	
-4.5	-4.25	
-4.25	-4	
-4	-3.75	
-3.75	-3.5	
-3.5	-3.25	
-3.25	-3	
-3	-2.75	
-2.75	-2.5	
-2.5	-2.25	
-2.25	-2	
-2	-1.75	
-1.75	-1.5	
-1.5	-1.25	
-1.25	-1	
-1	-0.75	
-0.75	-0.5	
-0.5	-0.25	
-0.25	0	
0	0.25	
0.25	0.5	
0.5	0.75	
0.75	1	
1	1.25	
1.25	1.5	
1.5	1.75	
1.75	2	
2	2.25	
2.25	2.5	
2.5	2.75	
2.75	3	
3	3.25	
3.25	3.5	

NOTES:

1. EARTHWORKS MODEL IS BASED ON POS 124000-50 & 00P - 100000AZM
2. APPROXIMATE DEPTH BETWEEN TRIPPED SURFACE AND EARTHWORKS SURFACE. STRIPPED SURFACE IS ASSUMED 300mm BELOW EXISTING SURFACE
3. APPROVAL OF THE ENGINEERING PLANS REQUIRED BEFORE THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE.

CONSTRUCTION ISSUE	LAPAF	MAB	GPC
REV	124000	124000	
DESCRIPTION	LAPAF 124000	APPROVED	G.ROMANZ
APPROVED			
DATE			

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 31545  
TEL: 03 8273 1500 verveprojects.com  
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HUME CITY COUNCIL  
PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54 MICKLEHAM  
CONSTRUCTION  
REF ID: 366 F1 PROJECT NO: 17040-54 DRAWING NO: EW301

PROJECT: Merrifield Estate – Section D – Stage 54 (Level 1)	CLIENT: BMD Urban	DATE: 28/07/2023	SITE PLAN SKETCH—NOT TO SCALE
LOCATION: Mickleham	PROJECT No: 1120 0428-1 (SI23)		



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

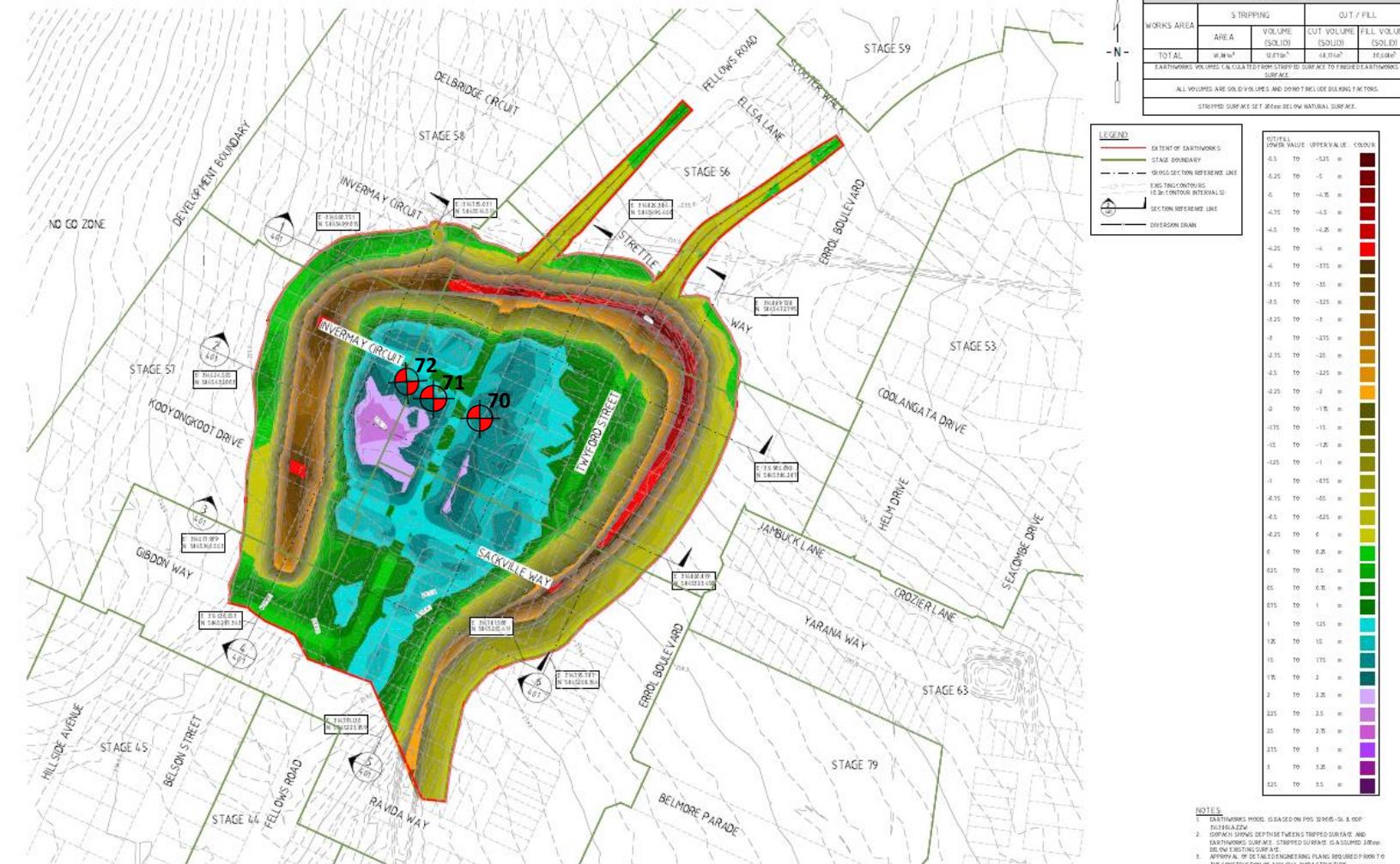
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	24
<b>Location:</b>	Mickleham				
Sample No	70	71	72		
Date Tested	31/07/2023	31/07/2023	31/07/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		1	2	2	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.89	1.92	1.81	
Field Moisture Content	%	24.2	23.5	25.0	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	3.0	3.5	0.9	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.95	1.95	1.84	
Optimum Moisture Content	%	25	24	23.5	
<b>Moisture Ratio</b>	%	97	98	106.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	1.5	
<b>Density Ratio</b>	%	Drier	Drier	Wetter	
		96.5	98.0	98.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI24)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <p style="text-align: center;"> <b>NATA</b>  <small>WORLD RECOGNISED ACCREDITATION</small> </p> <p style="text-align: center;">         NATA Accredited Laboratory No. 20172          Accreditation for compliance with ISO/IEC 17025 - Testing       </p> <div style="text-align: right;">           David Burns          Date: 31/07/2023       </div>					





## Test Location



			NAME: J.BARCELO <small>(REMOVED)</small>	H 1 : 1000    0    10    20    40    60    80
			NAME: J.BARCELO <small>(REMOVED)</small>	0    A1
			APPROVED: LAPAP	
<small>E</small> CONSTRUCTION ISSUE	LAPAP	EMAIL:	APPROVED:	
REV DESCRIPTION	APPROVED DATE		G.ROMANZ	



HUKE CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION	366 F1	17040-54	EW301	0
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**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
31/07/2023

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (S124)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

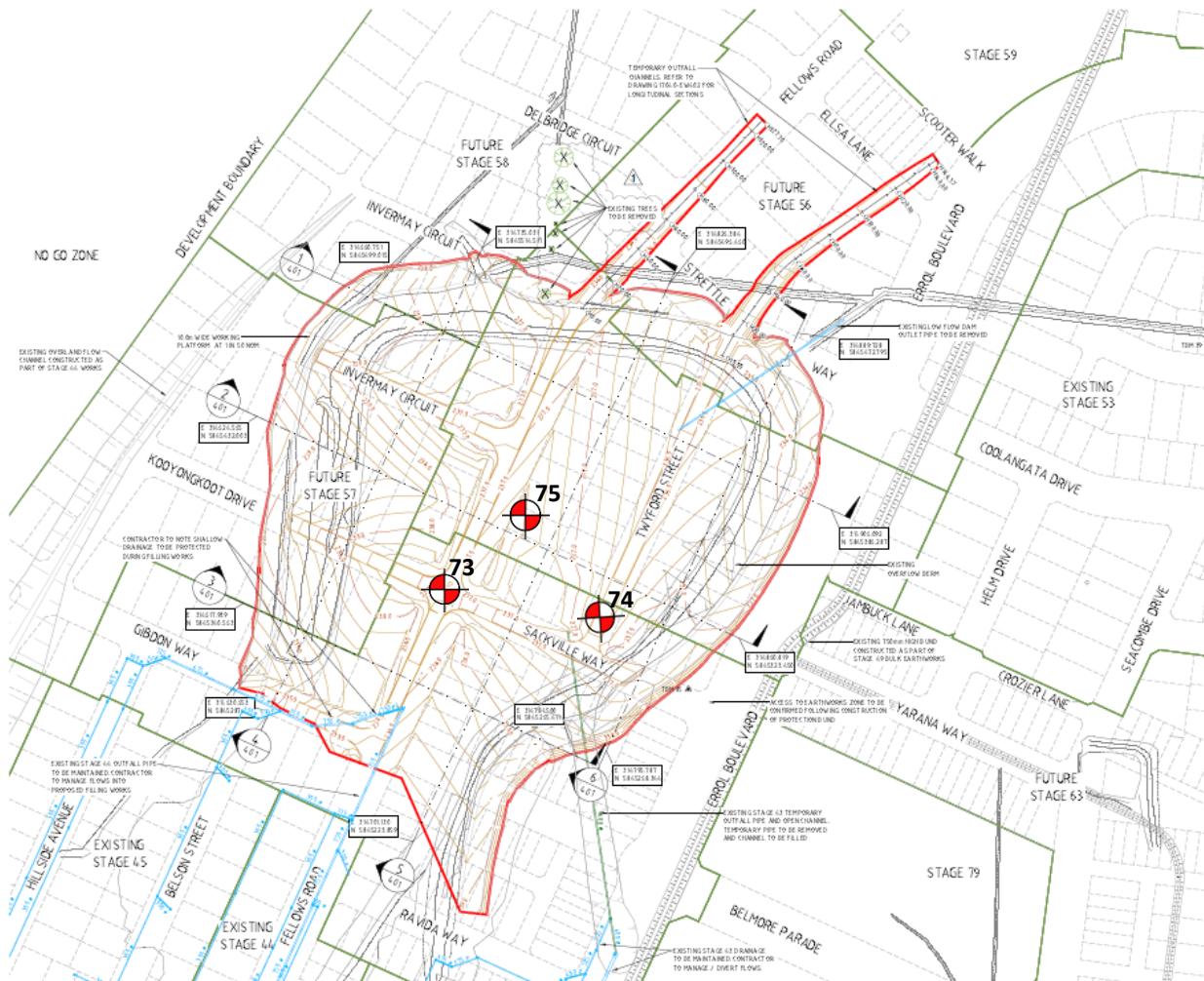
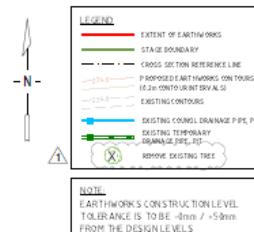
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	25
<b>Location:</b>	Mickleham				
Sample No	73	74	75		
Date Tested	01/08/2023	01/08/2023	01/08/2023		
Time Tested	AM	AM	AM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		8	7	7	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.99	1.97	2.05	
Field Moisture Content	%	21.4	23.3	22.7	
Material:		Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.06	2.04	2.10	
Optimum Moisture Content	%	22	23.5	23.5	
<b>Moisture Ratio</b>	%	97.5	99	96.5	
<b>Moisture Variation from OMC</b>	%	-0.5	0.0	-0.5	
<b>Density Ratio</b>	%	Drier	OMC	Drier	
		96.5	96.5	97.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI25)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>Date:</span> <span>David Burns</span> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span></span> <span>25/08/2023</span> </div>					



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	1/08/23
2. CONSTRUCTION ISSUE:	LAPAP	2/08/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80  
A1
**merrifield**  
**MAB GPC**
**verve**  
Ground Floor, 207-213 Waverley Road,  
Mickleham East VIC 3342  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

REF: 366 F1 INC: 17040-54 EW: 201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
01/08/2023

**LOCATION:**  
Mickleham

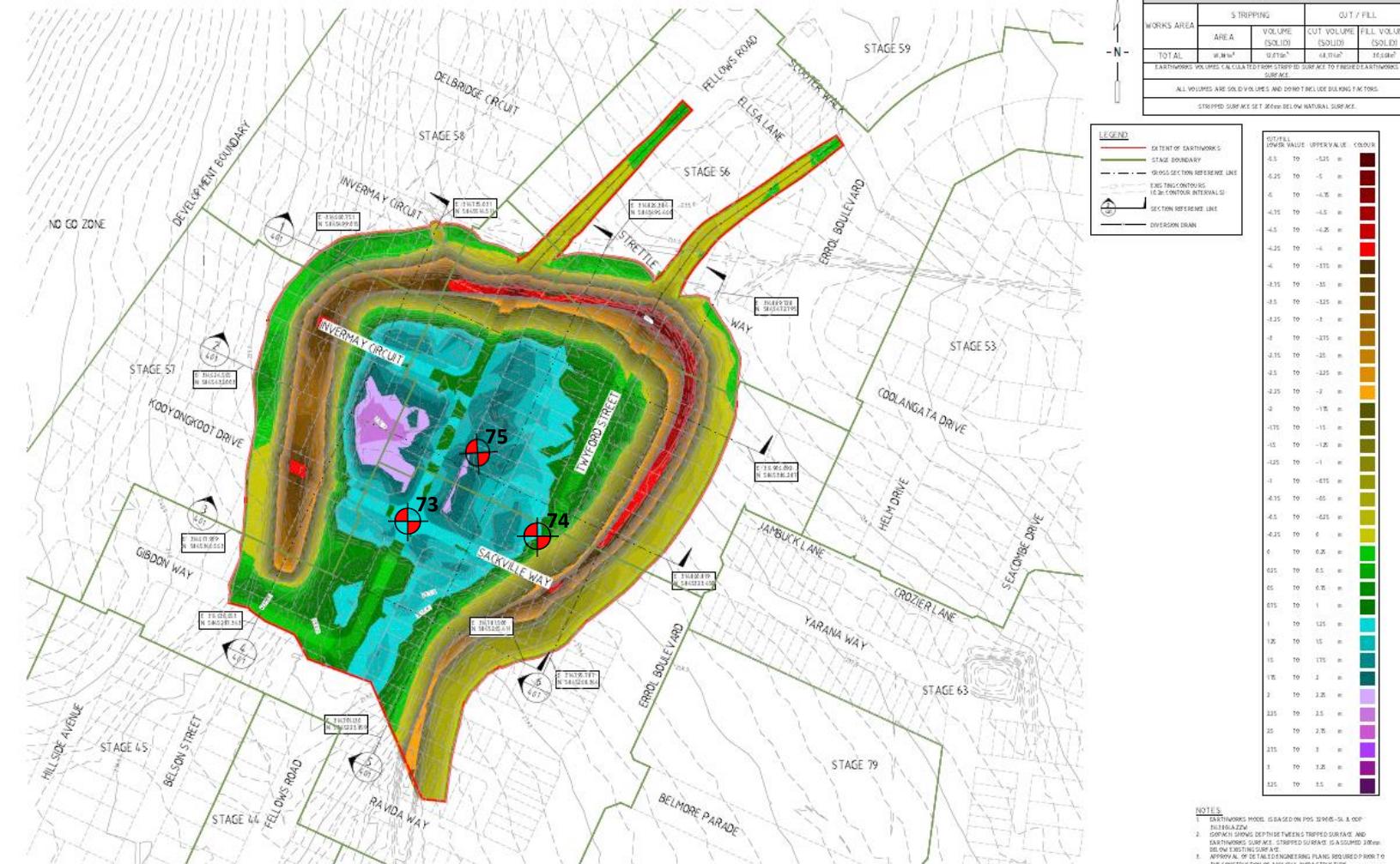
**PROJECT No:**  
1120 0428-1 (SI25)

SITE PLAN SKETCH—NOT TO SCALE


**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	REQUEST REF: 366 F1
	PROJECT NO: 17040-54
	EW301
	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S12E)**

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

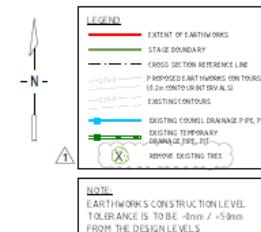
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	26
<b>Location:</b>	Mickleham				
Sample No	76	77	78		
Date Tested	02/08/2023	02/08/2023	02/08/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		4	4	4	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	2.01	1.93	1.91	
Field Moisture Content	%	21.2	23.6	24.3	
Material:		Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.06	2.00	1.96	
Optimum Moisture Content	%	22	24	22.5	
<b>Moisture Ratio</b>	%	96.5	98.5	108	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	2.0	
<b>Density Ratio</b>	%	Drier	Drier	Wetter	
		97.5	96.5	97.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI26)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023					

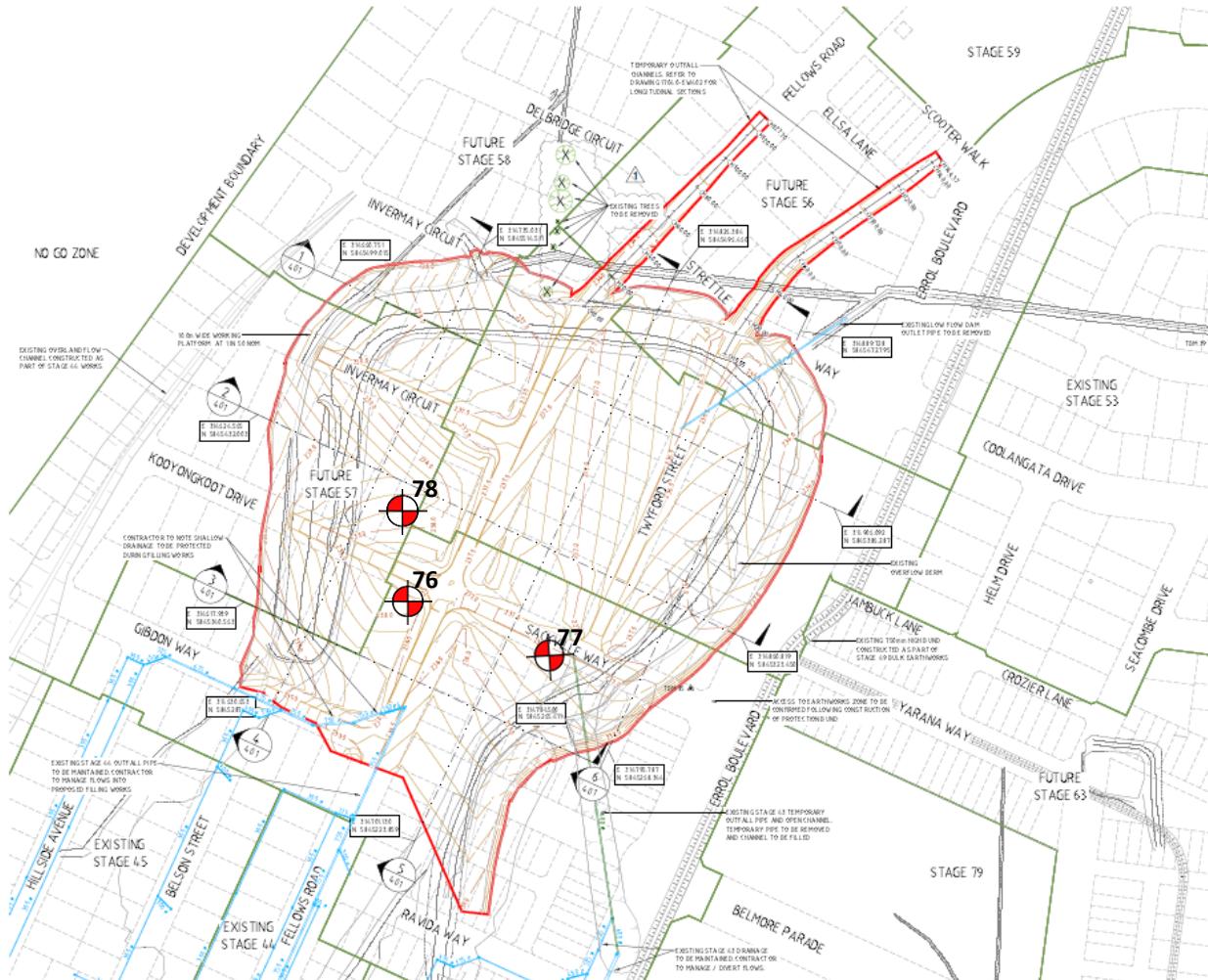


Test Location



**NOTES:**

1. FOR TEST POINTS, POINTS ON PLAN REFER TO VERTIS CONTROL PLAN PERRFIELD TERRAIN TIR PLAN, JUNE 2012.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	Y/0.21
2. CONSTRUCTION ISSUE:	LAPAP	2/04/23 APPROVED
REV DESCRIPTION	APPROVED DATE	G.GROMANZ

H=1000 0 10 20 30 40 50 60 70

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3144  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
02/08/2023

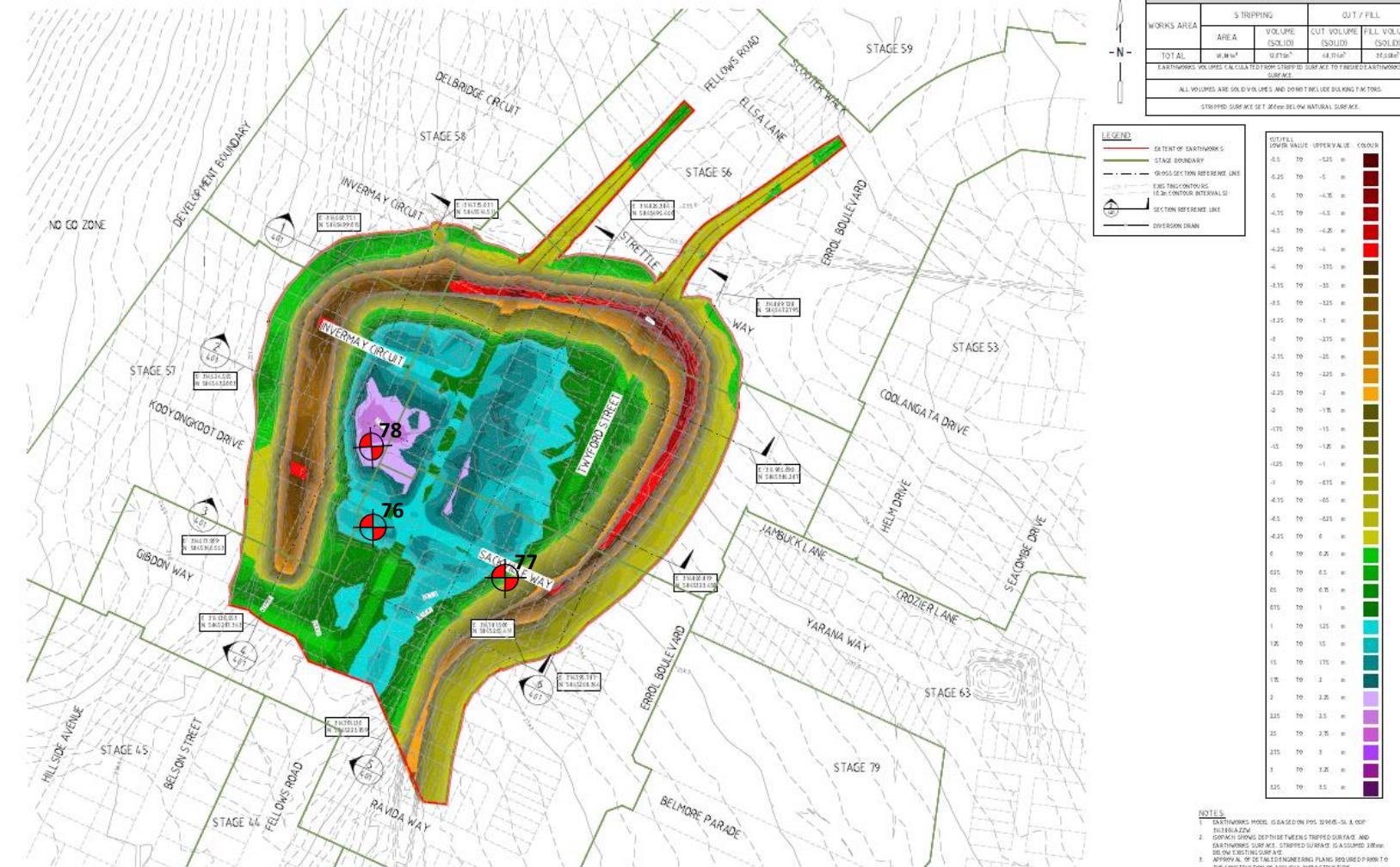
**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI26)

SITE PLAN SKETCH—NOT TO SCALE



## Test Location



				J BARCELO	
				REVISOR	
				J BARCELO	
				REVISOR	
				LAPAP	
2 CONSTRUCTION ISSUE	LLAPAP	EMAIL:21	APPROVED	G ROMANZC	
REV DESCRIPTION	APPROVED	DATE			



HUME CITY COUNCIL		Plan No.		
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM				
BULK EARTHWORKS ISOPACH PLAN				
<b>CONSTRUCTION</b>	366 F1	17040-54	EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S126)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

---

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

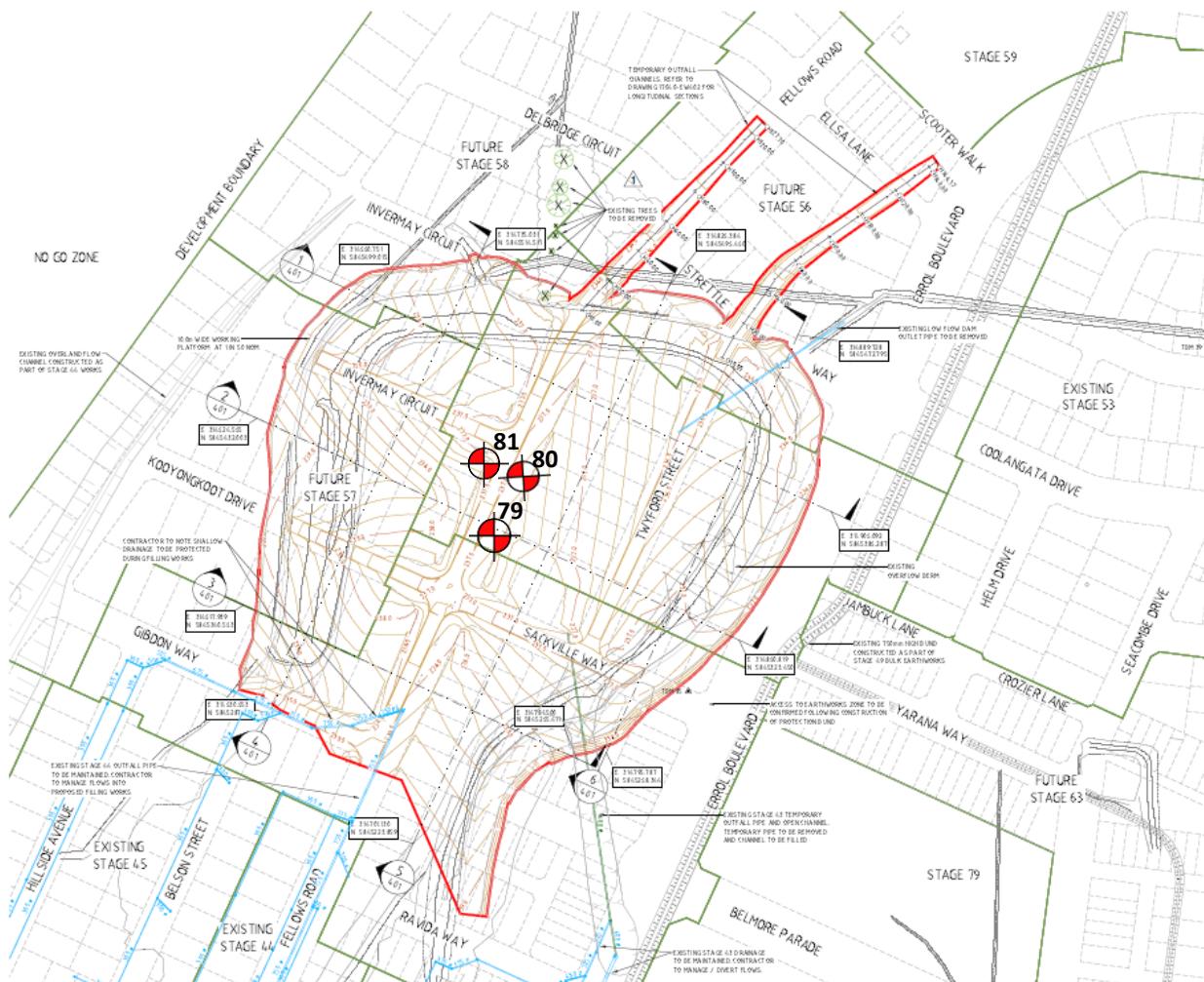
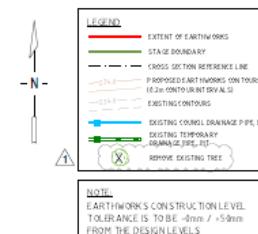
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	27
<b>Location:</b>	Mickleham				
Sample No	79	80	81		
Date Tested	03/08/2023	03/08/2023	03/08/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		4	6	6	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.95	1.91	2.00	
Field Moisture Content	%	23.1	24.0	21.7	
Material:		Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	1.99	2.06	
Optimum Moisture Content	%	24	24.5	22.5	
<b>Moisture Ratio</b>	%	96	98	96.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		96.5	96.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI27)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023					



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	Y/01/21
2. CONSTRUCTION ISSUE:	LAPAP	2/04/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Mataura East VIC 3142  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
03/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI27)

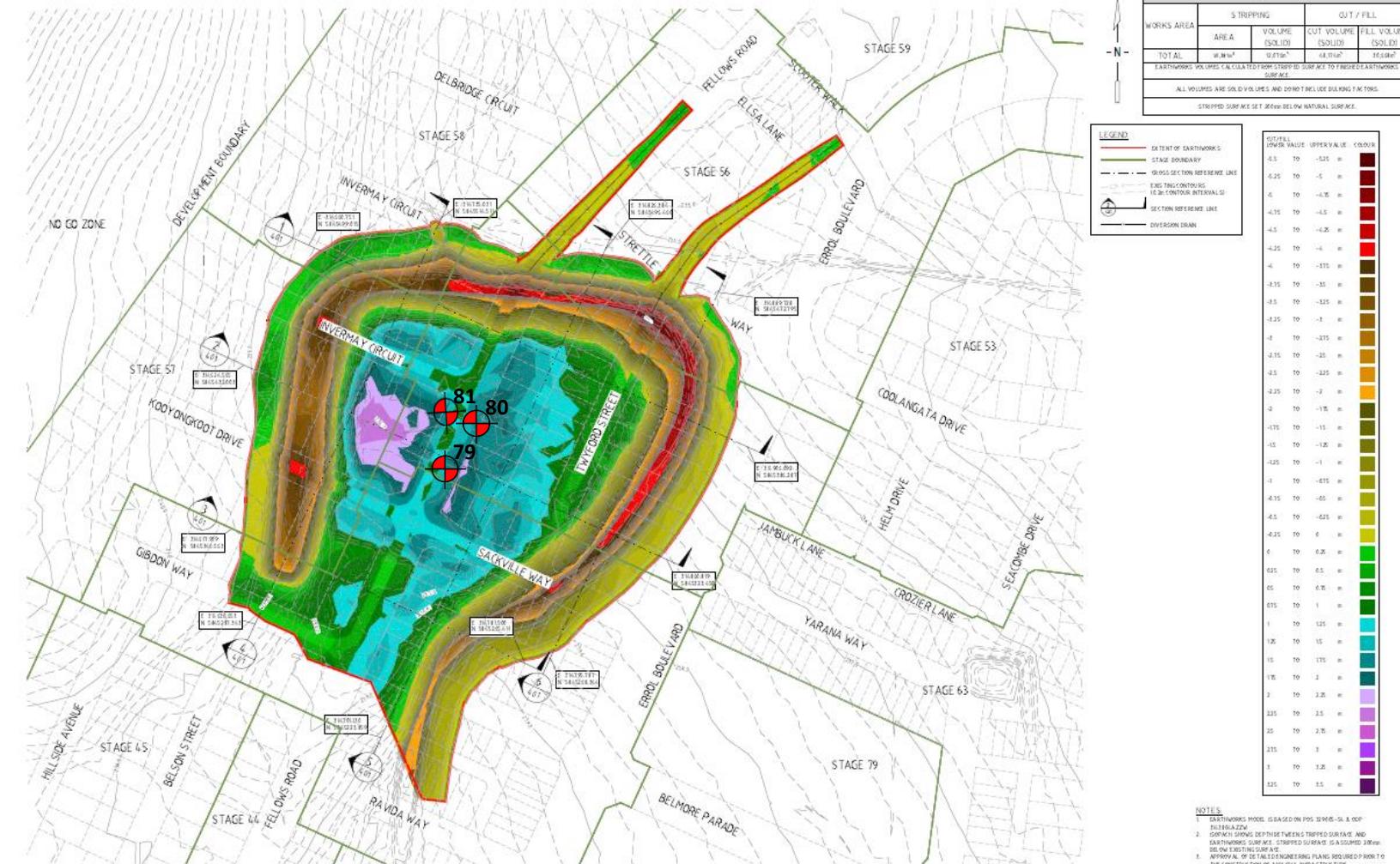
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUKE CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
03/08/2023

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (S127)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

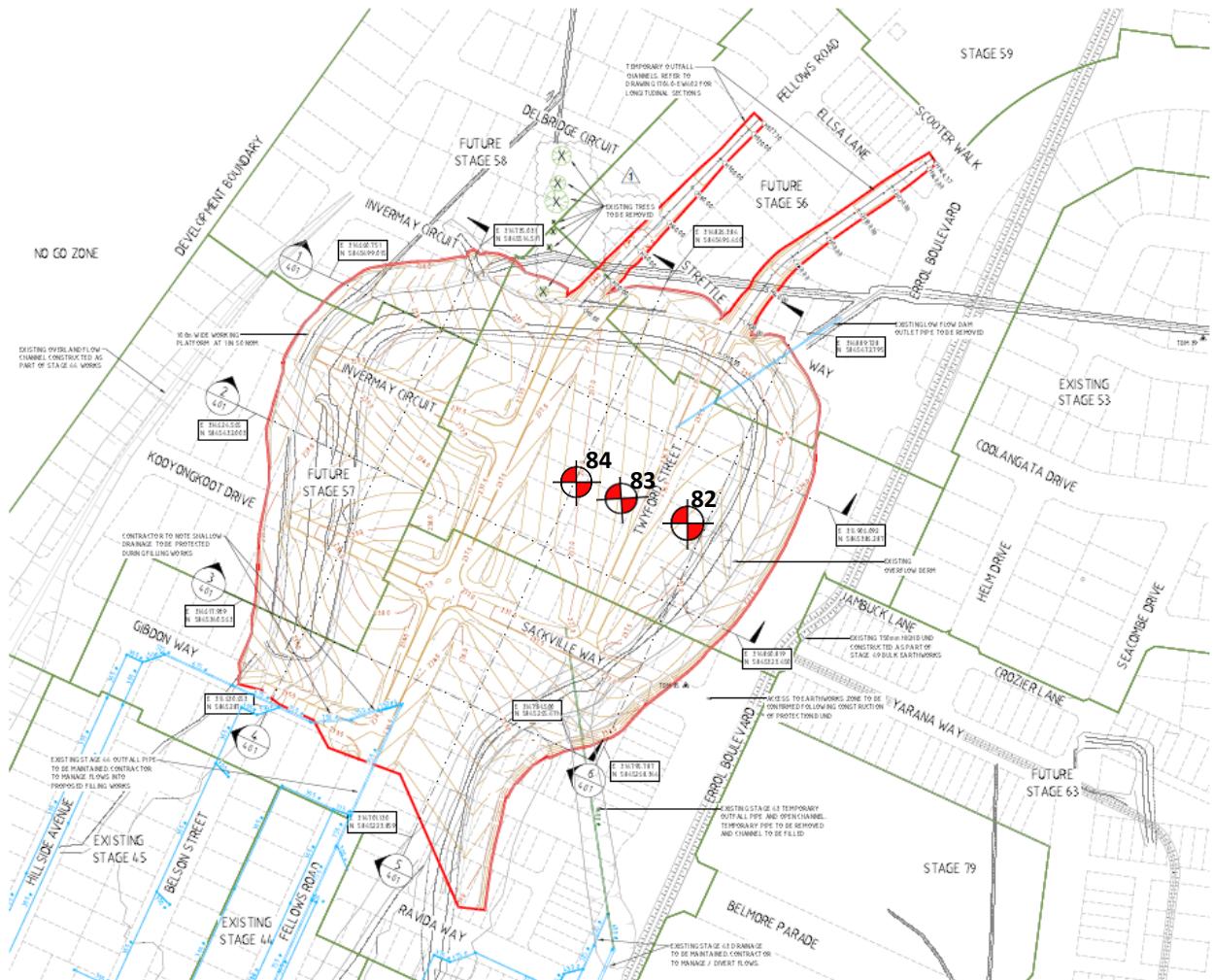
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	28
<b>Location:</b>	Mickleham				
Sample No	82	83	84		
Date Tested	04/08/2023	04/08/2023	04/08/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	1	1	1		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.94	1.97		
Field Moisture Content	%	24.3	22.8		
Material:	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.01	2.04		
Optimum Moisture Content	%	24.5	23.5		
<b>Moisture Ratio</b>	%	99	97	106.5	
<b>Moisture Variation from OMC</b>	%	0.0	-0.5	1.5	
<b>Density Ratio</b>	%	OMC	Drier	Wetter	
		96.5	96.5	96.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI28)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	25/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



## Test Location



			APPROVED	J.BARCELO
			APPROVED	J.BARCELO
			APPROVED	J.BARCELO
1	TREES TO BE REMOVED	LAPAP	APPROVED	LAPAP
2	CONSTRUCTION ISSUE	LAPAP	APPROVED	LAPAP
REV	REMARKS	REMARKS	DATE	G.ROMANZ

H 1:1000 0 10 20 40 60 80

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—

10.1002/anie.201907002

— 1 —

Digitized by srujanika@gmail.com

NT:

### **Urban**

Urban

JECT No:

JECT NO.

0428-1 (SI28)

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DATE:  
04/08/2023

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SITE PLAN SKETCH—NOT TO SCALE

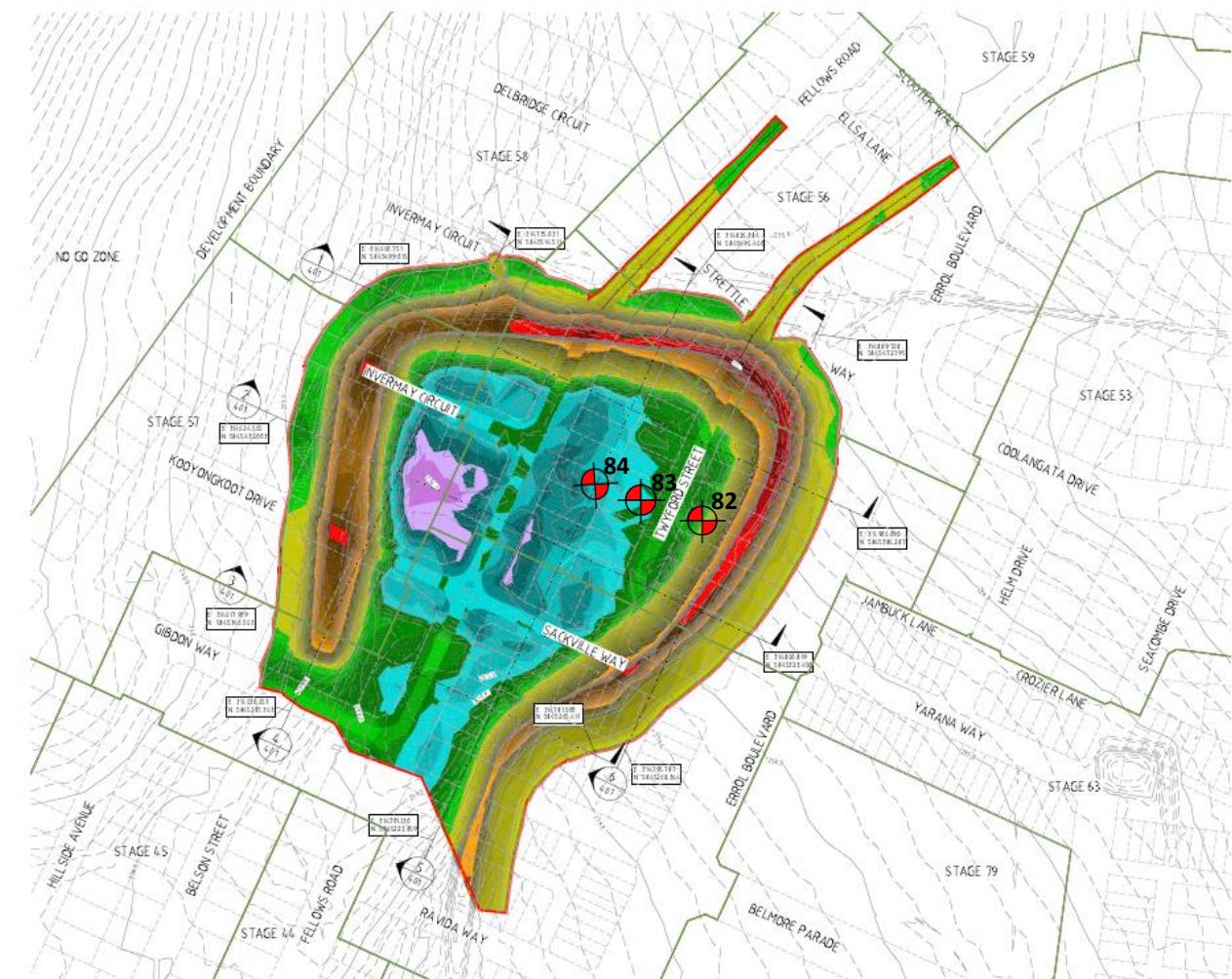
A

# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS



Test Location



WORKS AREA	VOLUMES		CUT / FILL
	STRIPPING	CUT VOLUME	
TOTAL	AREA (HA)	VOLUME (SOLID)	CUT VOLUME (SOLID)
EARTHWORKS VOLUMES CALCULATED FROM STRIPPED SURFACE TO FINISHED EARTHWORKS SURFACE			
ALL VOLUMES ARE SOLID VOLUMES AND DO NOT INCLUDE BULKING FACTORS.			
STRIPPED SURFACE SET 300mm BELOW NATURAL SURFACE.			

EXTENT OF EARTHWORKS
STAGE BOUNDARY
GROSS SECTION REFERENCE LINE
EXISTING CONTOURS (10m CONTOUR INTERVALS)
SECTION REFERENCE LINE
DIVISION DRAIN

LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	Black
-4.25	-5	Dark Red
-4	-4.25	Red
-3.75	-4	Dark Brown
-3.5	-3.75	Brown
-3.25	-3.5	Dark Olive Green
-3	-3.25	Olive Green
-2.75	-3	Light Green
-2.5	-2.75	Yellow Green
-2.25	-2.5	Yellow
-2	-2.25	Light Yellow
-1.75	-2	Light Green
-1.5	-1.75	Light Blue
-1.25	-1.5	Medium Blue
-1	-1.25	Dark Blue
-0.75	-1	Medium Dark Blue
-0.5	-0.75	Dark Teal
-0.25	-0.5	Teal
0	-0.25	Dark Green
0.25	0	Green
0.5	0.25	Dark Cyan
0.75	0.5	Cyan
1	0.75	Light Cyan
1.25	1	Light Blue
1.5	1.25	Medium Blue
1.75	1.5	Dark Blue
2	1.75	Medium Dark Blue
2.25	2	Dark Teal
2.5	2.25	Teal
2.75	2.5	Dark Green
3	2.75	Green
3.25	3	Light Cyan
3.5	3.25	Light Blue
3.75	3.5	Medium Blue
4	3.75	Dark Blue
4.25	4	Medium Dark Blue
4.5	4.25	Dark Teal

- NOTES:
- EARTHWORKS MODEL IS BASED ON POS 124000-50 & 00P - 124000-50Z
  - DEPTH IS MEASURED BETWEEN TRIPPED SURFACE AND EXISTING SURFACE. STRIPPED SURFACE IS ASSUMED 300mm BELOW EXISTING SURFACE.
  - APPROVAL OF THE ENGINEERING PLANS REQUIRED BEFORE THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE.

CONSTRUCTION ISSUE	LAPAF	APPROVED	DATE
REV 1	1240-21	G.ROMANZ	



HUME CITY COUNCIL		BULK EARTHWORKS ISOPACH PLAN	
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		CONSTRUCTION	
REF ID: 366 F1	PROJECT NO: 17040-54	REV: EW301	ISSUE DATE: 04/08/2023

PROJECT:  
Merrifield Estate – Section D – Stage 54 (Level 1)CLIENT:  
BMD UrbanDATE:  
04/08/2023LOCATION:  
MicklehamPROJECT No:  
1120 0428-1 (SI28)

SITE PLAN SKETCH—NOT TO SCALE

A&Y ASSOCIATES  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	29
<b>Location:</b>	Mickleham				
Sample No	85	86	87		
Date Tested	07/08/2023	07/08/2023	07/08/2023		
Time Tested	AM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		1	3	3	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.87	1.95	1.98	
Field Moisture Content	%	25.0	24.3	23.6	
Material:		Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	1.95	2.02	2.04	
Optimum Moisture Content	%	23	22.5	24	
<b>Moisture Ratio</b>	%	108.5	108	98.5	
<b>Moisture Variation from OMC</b>	%	2.0	1.5	0.0	
<b>Density Ratio</b>	%	Wetter	Wetter	OMC	
		96.0	96.5	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI29)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023					





# Field Density Test Results

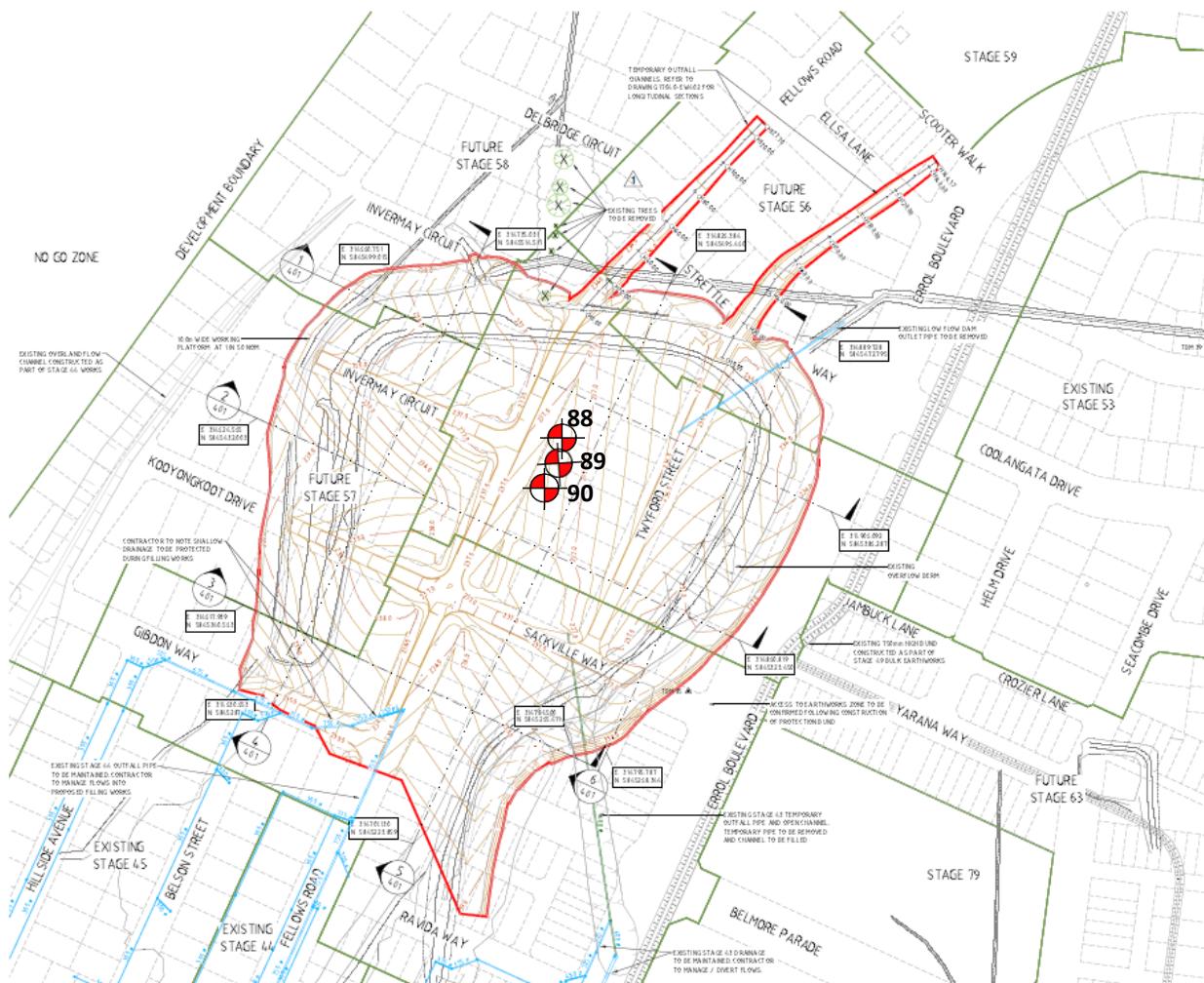
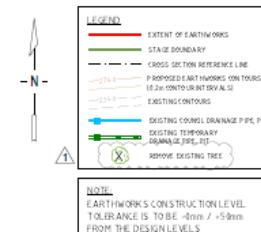
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	30
<b>Location:</b>	Mickleham				
Sample No	88	89	90		
Date Tested	08/08/2023	08/08/2023	08/08/2023		
Time Tested	AM	AM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		1	1	3	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.94	1.93	1.98	
Field Moisture Content	%	23.7	24.0	22.1	
Material:		Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	Site Derived Silty Gravelly Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	2.01	2.05	
Optimum Moisture Content	%	24	24	23	
<b>Moisture Ratio</b>	%	99	100	96	
<b>Moisture Variation from OMC</b>	%	-0.5	0.0	-0.5	
<b>Density Ratio</b>	%	Drier	OMC	Drier	
		96.5	96.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI30)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>			<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small> <small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023		



Test Location



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	01/08/23
2. CONSTRUCTION ISSUE:	LAPAP	24/04/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80  
A1
**merrifield**  
**MAB GPC**
**verve**  
Ground Floor, 207-213 Waverley Road,  
Mataura East VIC 3142  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

REF ID: 366 F1 | RELEASE DATE: 17040-54 | EW201 | 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
08/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S130)

SITE PLAN SKETCH—NOT TO SCALE


**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Field Density Test Results

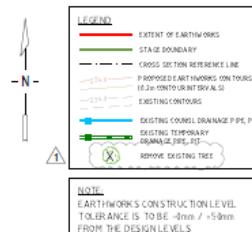
### AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	31
<b>Location:</b>	Mickleham				
Sample No	91	92	93		
Date Tested	9/08/2023	9/08/2023	9/08/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	2	4	4		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.95	1.91		
Field Moisture Content	%	21.6	23.7		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.03	1.99		
Optimum Moisture Content	%	22.5	24		
<b>Moisture Ratio</b>	%	96	99	98	
<b>Moisture Variation from OMC</b>	%	-1.0	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		96.0	95.5	96.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI31)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
	NATA Accredited Laboratory No. 20172 Accreditation for compliance with ISO/IEC 17025 - Testing			<b>Date:</b>	David Burns 25/08/2023



Test Location

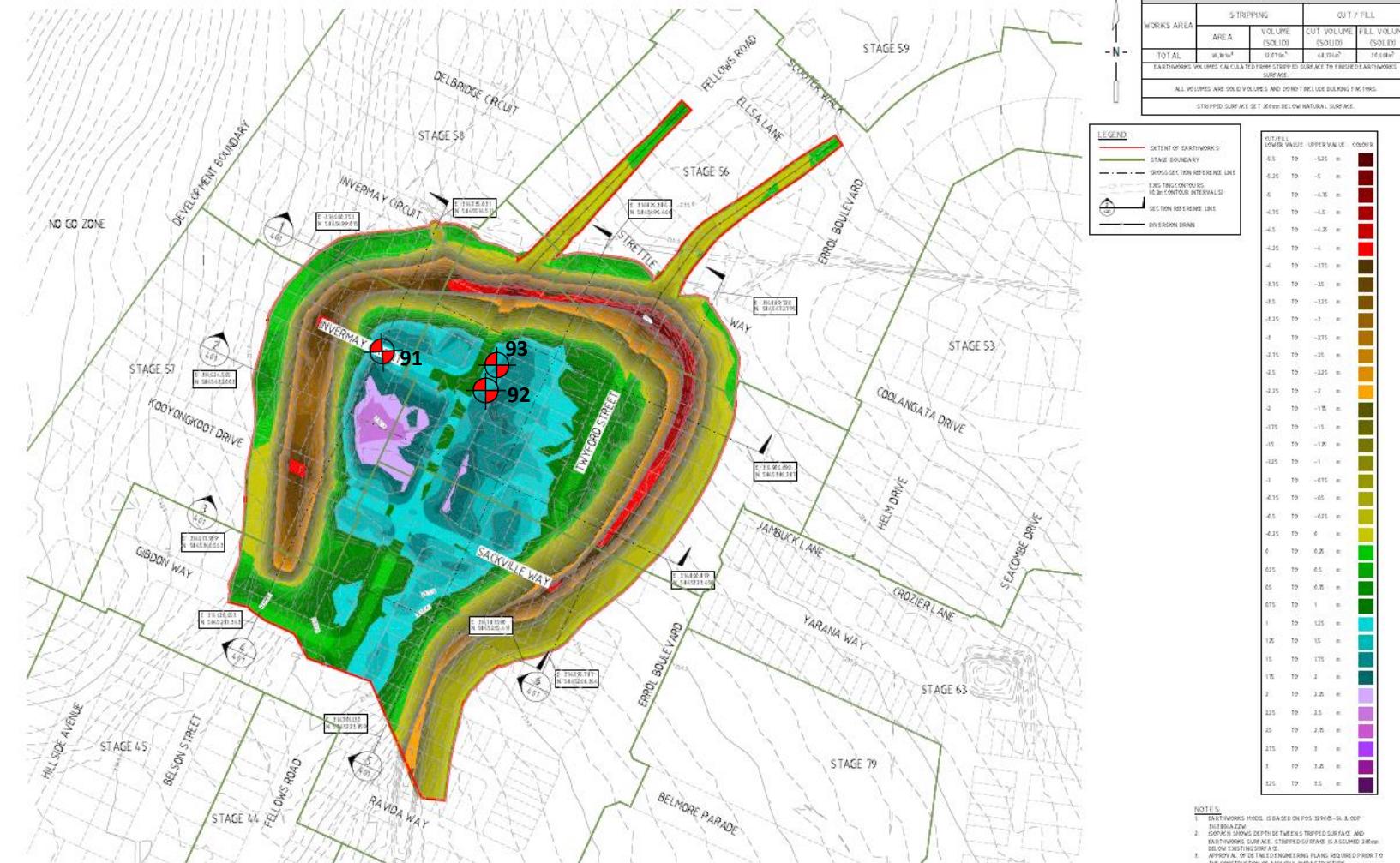


**NOTES:**

1. FOR THE POINTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 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## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	REF ID: 366 F1
REF ID: 17040-54	REF ID: EW301
REF ID: 0	REF ID: 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
09/08/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S131)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

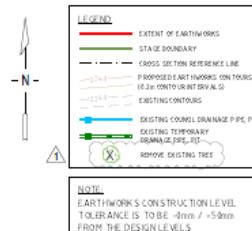
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

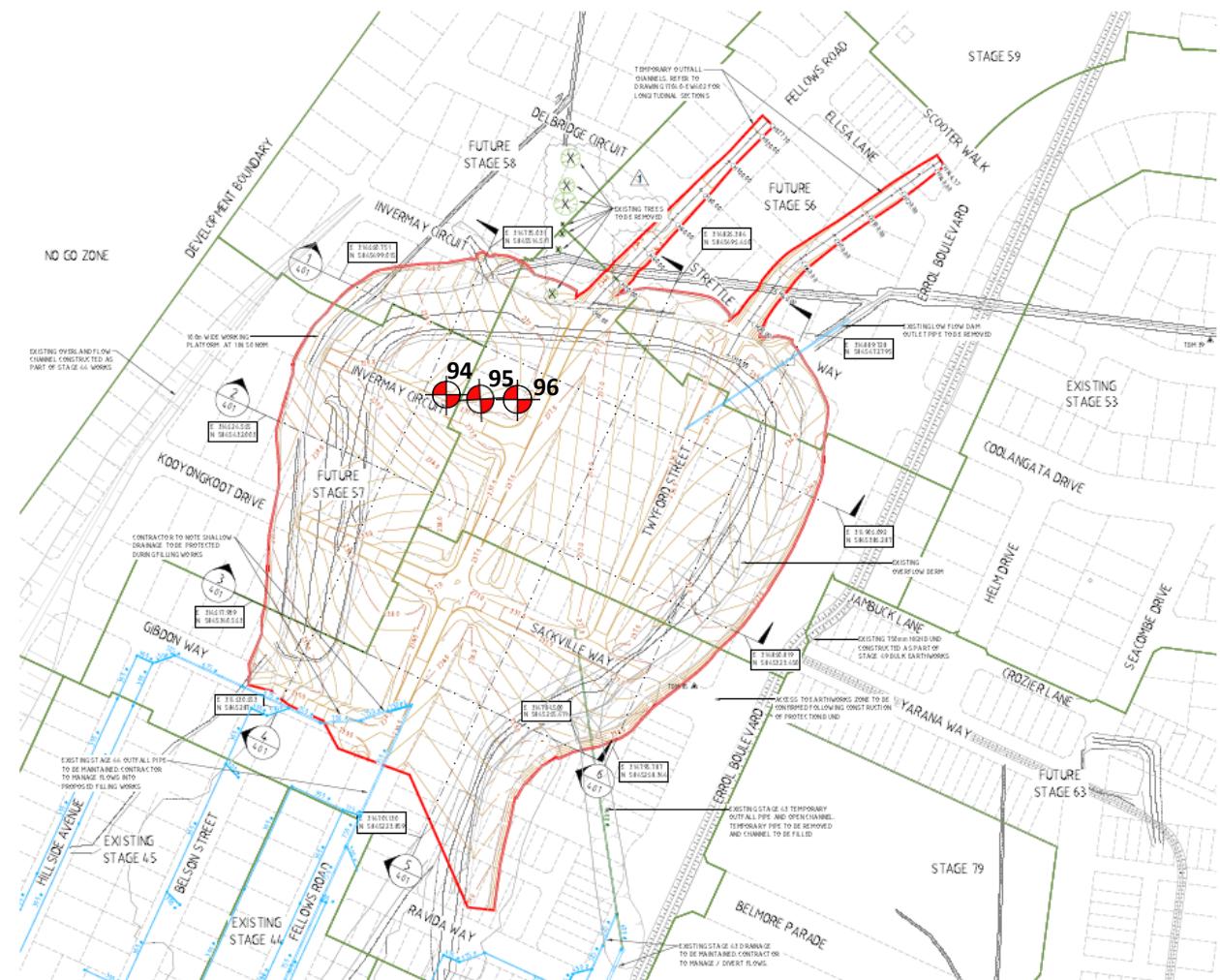
<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	32			
<b>Location:</b>	Mickleham							
Sample No	94	95	96					
Date Tested	10/08/2023	10/08/2023	10/08/2023					
Time Tested	PM	PM	PM					
Test Location		Refer to Plan	Refer to Plan	Refer to Plan				
Level/Layer		1	1	1				
Layer Thickness	mm	200	200	200				
Test Depth	mm	175	175	175				
Field Wet Density	t/m <sup>3</sup>	1.93	1.96	1.95				
Field Moisture Content	%	23.8	22.2	22.9				
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay				
Oversize Material	WET, %	0.0	0.0	0.0				
Sieve Size	mm	19	19	19				
Peak Converted Wet Density	t/m <sup>3</sup>	2.01	2.03	2.01				
Optimum Moisture Content	%	22	23	21				
<b>Moisture Ratio</b>	%	108	96.5	109				
<b>Moisture Variation from OMC</b>	%	2.0	-1.0	2.0				
<b>Density Ratio</b>	%	96.0	97.0	97.0				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI32)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <small>NATA ACCREDITED</small> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns Date: 25/08/2023								



Test Location



- NOTES:**
1. FOR THE POINTS ON THIS INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS LAYOUT PLAN, JAC 2012.
  2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS ACTIVITIES.
  3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO	H:1000 0 10 20 40 60 80
1. TREES TO BE REMOVED:	LAPAP	1/10/21	
2. CONSTRUCTION ISSUE:	LAPAP	1/10/21	
REV DESCRIPTION	APPROVED DATE	GROMANZ	



**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
10/08/2023

**LOCATION:**  
Mickleham

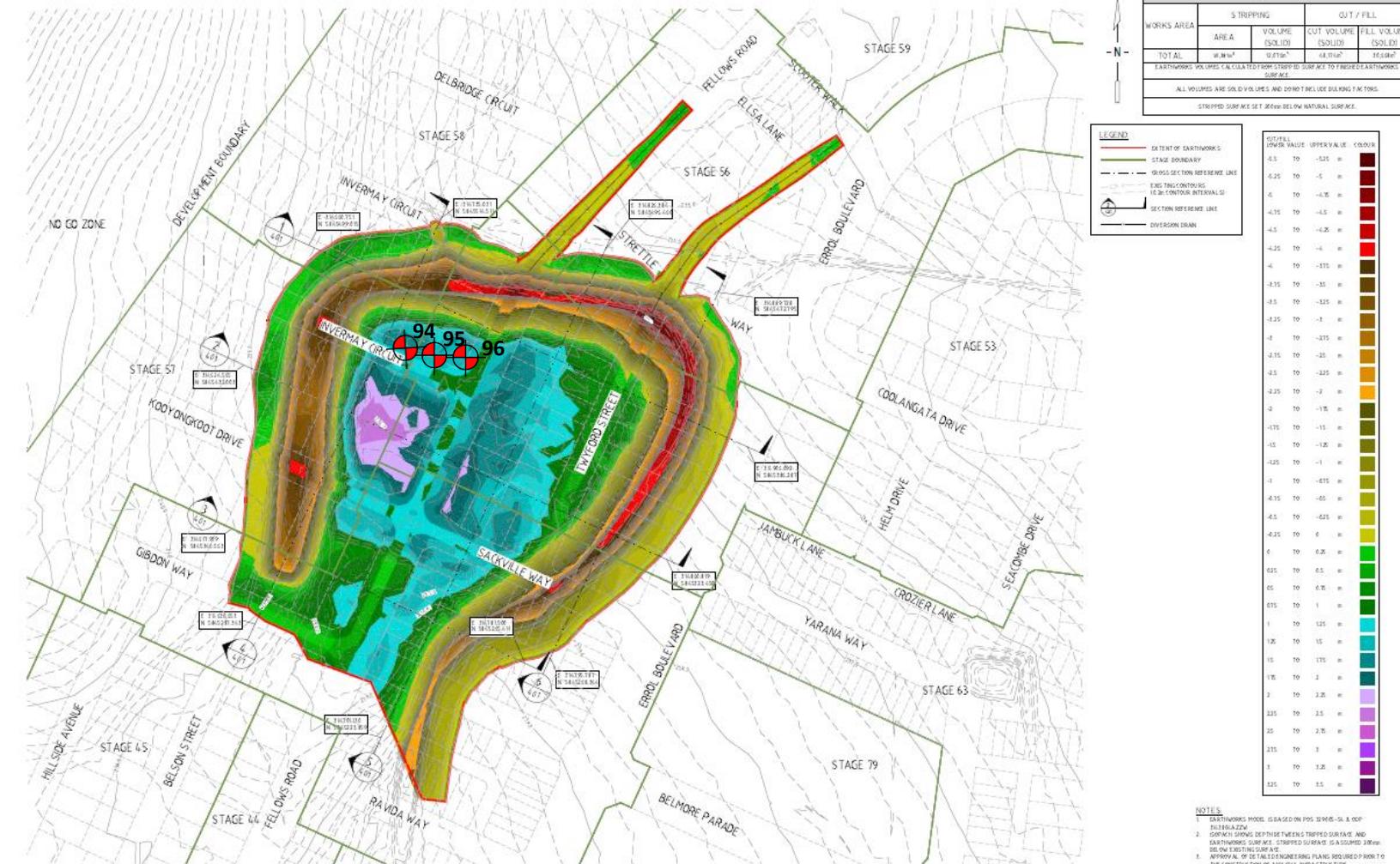
**PROJECT No:**  
1120 0428-1 (S132)

SITE PLAN SKETCH—NOT TO SCALE





## Test Location



			NAME:	J. BARCELLO
			APPROVED:	10/06/01
			NAME:	J. BARCELLO
			APPROVED:	10/06/01
			NAME:	LAPAP
			APPROVED:	10/06/01
<input checked="" type="checkbox"/>	CONSTRUCTION ISSUE	LAPAP	DATE:	10/06/01
REASON DESCRIPTION	APPROVED DATE	G. ROMANZ		



HUKE CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**CONSTRUCTION**      366 F1      17040-54      EW301      0

NOTES:

1. EARTHWORKS MODEL IS BASED ON POS. 119055-51 & 000-1116622W.
2. SECTION SHOWS DEPTH BETWEEN TRIPPED SURFACE AND EARTHWORK SURFACE. STRIPPED SURFACE IS ASSUMED 10m BELOW EXISTING SURFACE.
3. APPROX. AL. OF DETAILED ENGINEERING PLANS REQUIRED P.R.O.B. TO THE CONSTRUCTION OF ANY GULLY INFRASTRUCTURE.

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S132)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	33
<b>Location:</b>	Mickleham				
Sample No	97	98	99		
Date Tested	11/08/2023	11/08/2023	11/08/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	2	2	1		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.95	1.93		
Field Moisture Content	%	23.3	24.2		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.03	1.99		
Optimum Moisture Content	%	24	22.5		
<b>Moisture Ratio</b>	%	97	107.5	98.5	
<b>Moisture Variation from OMC</b>	%	-1.0	2.0	-0.5	
<b>Density Ratio</b>	%	Drier	Wetter	Drier	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI33)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	25/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					





# Field Density Test Results

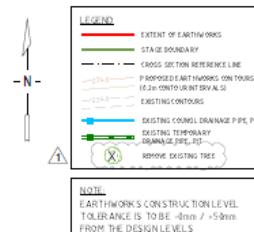
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	34
<b>Location:</b>	Mickleham				
Sample No	100	101	102		
Date Tested	14/08/2023	14/08/2023	14/08/2023		
Time Tested	AM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	2	3	3		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.94	1.97	1.95	
Field Moisture Content	%	23.2	22.6	23.0	
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	2.03	2.01	
Optimum Moisture Content	%	24	23	21	
<b>Moisture Ratio</b>	%	97	98.5	109.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	2.0	
<b>Density Ratio</b>	%	Drier	Drier	Wetter	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI34)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	25/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p><b>NATA Accredited Laboratory No. 20172</b> Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns 25/08/2023</p> </div> </div>					

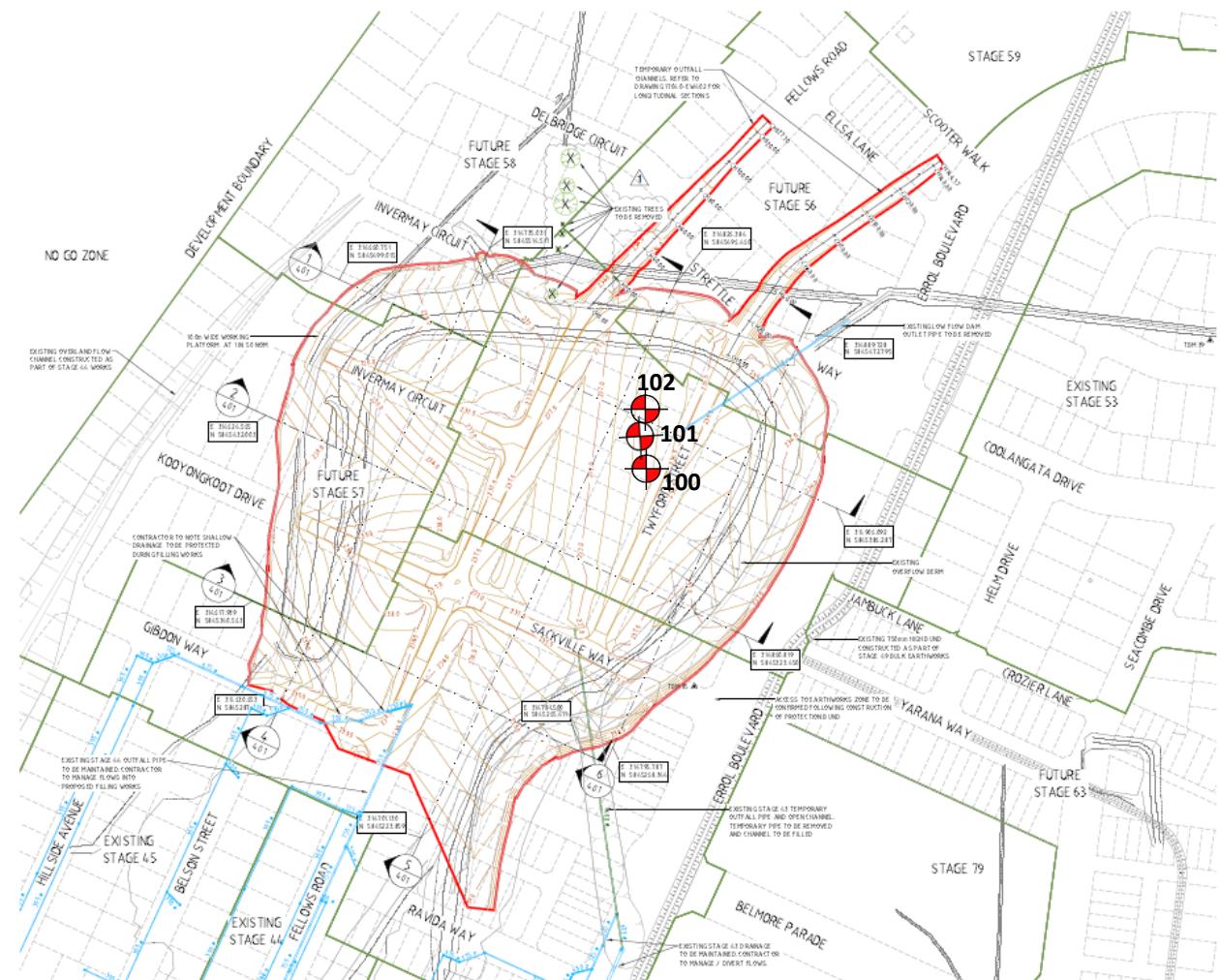


Test Location



**NOTES:**

1. FOR THE POINTS ON THIS INFORMATION REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS LAYOUT PLAN, JAC 2023.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING CONSTRUCTION AND REMOVE AS UNNECESSARY.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVISED SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	10/08/23
2. CONSTRUCTION ISSUE:	LAPAP	24/04/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 30 40 50 60 70

A1

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3154  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

366 F1

17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
14/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S134)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (S134)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

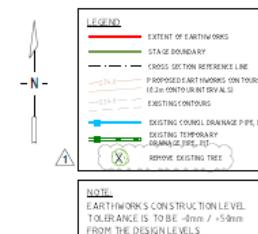
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	35			
<b>Location:</b>	Mickleham							
Sample No	103	104	105					
Date Tested	15/08/2023	15/08/2023	15/08/2023					
Time Tested	PM	PM	PM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	5	1	1					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.90	1.89					
Field Moisture Content	%	23.0	24.3					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	1.99	1.95					
Optimum Moisture Content	%	21.5	22.5					
<b>Moisture Ratio</b>	%	107	108	99				
<b>Moisture Variation from OMC</b>	%	2.0	2.0	-0.5				
<b>Density Ratio</b>	%	Wetter	Wetter	Drier				
		96.0	97.0	97.0				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI35)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023								

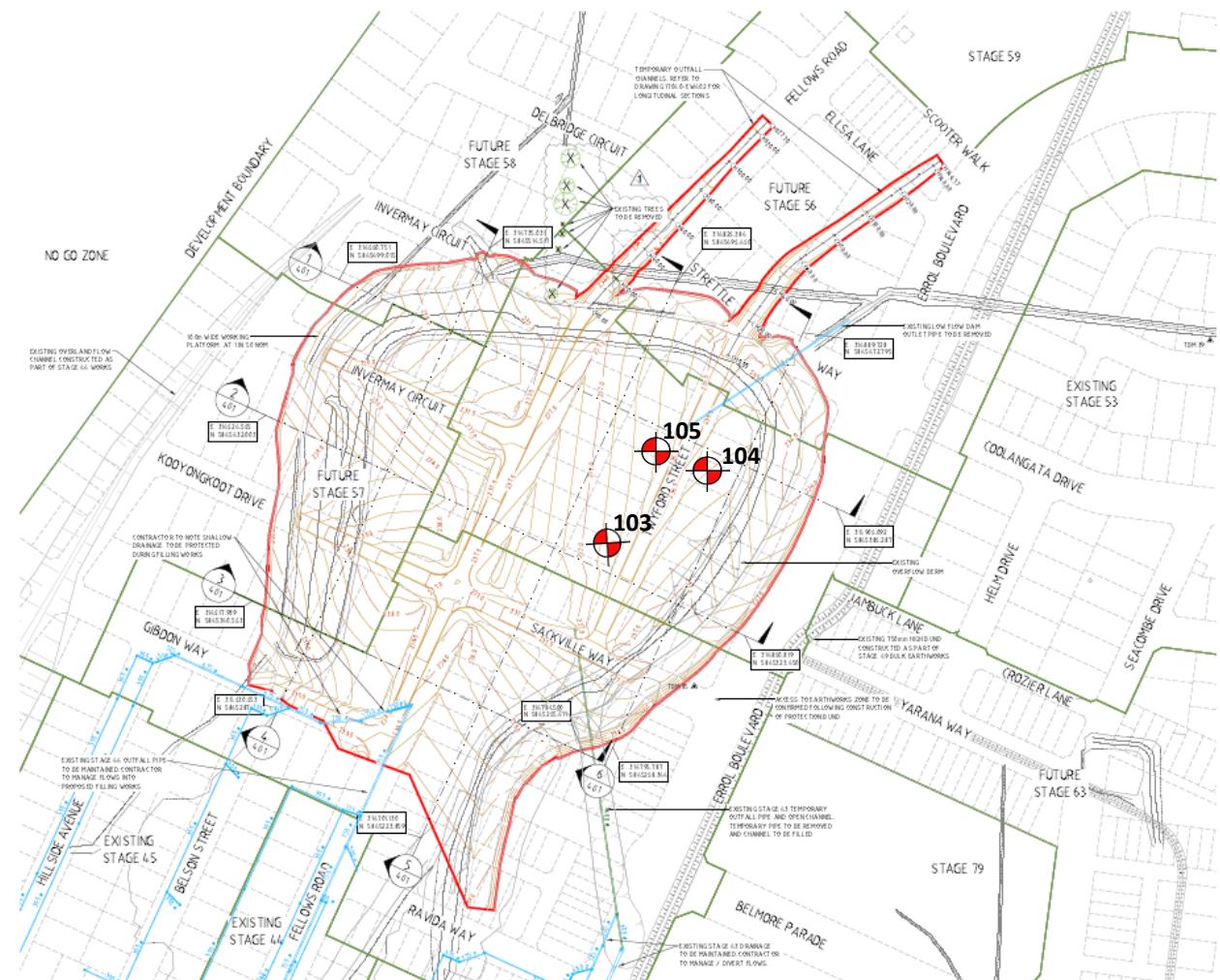


Test Location



**NOTES:**

1. FOR TEST POINTS, POINTS ON THIS PLAN REFER TO VARIOUS CONTROL PLAN PERMITTED BY THIS PLAN, JAC 2012.
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE DURING EARTHWORKS.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL AS PER CONTRACTUAL ADVICE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.



		J.BARCELO
1. TREES TO BE REMOVED:	LAPAP	10/08/23
2. CONSTRUCTION ISSUE:	LAPAP	24/04/23
REV DESCRIPTION	APPROVED DATE	GROMANZ

H=1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

verve  
Ground Floor, 207-213 Waverley Road,  
Malvern East VIC 3144  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

CONSTRUCTION

BULK EARTHWORKS  
LAYOUT PLAN

366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
15/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S135)

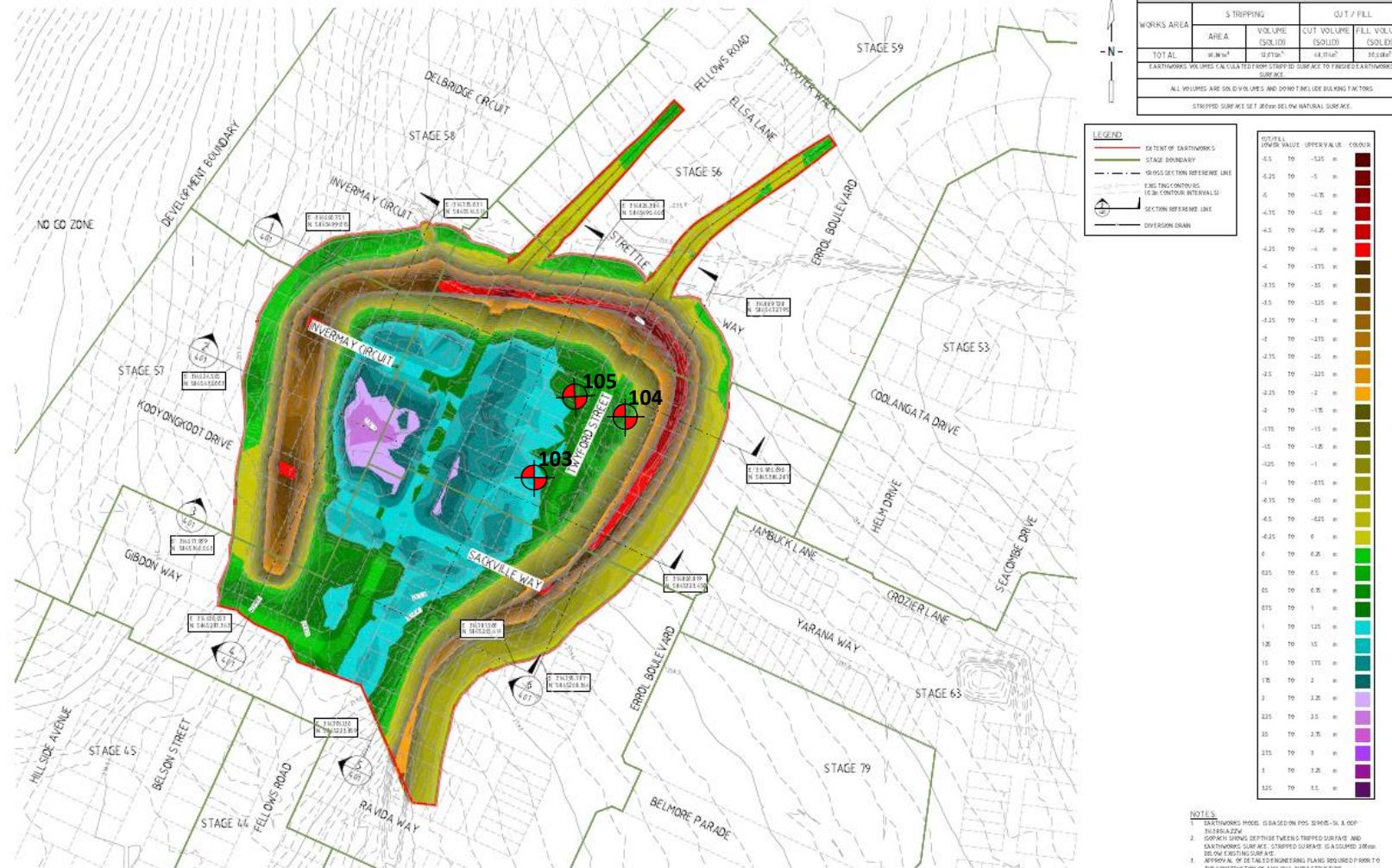
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				REVISOR	
				J BARCELO	
				REVISOR	
				LAPAP	
2 CONSTRUCTION ISSUE	LLAPAP	EMAIL:21	APPROVED	G ROMANZC	
REV DESCRIPTION	APPROVED	DATE			



HOME CITY CONCERN

MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM BULK EARTHWORKS ISOPACH PLAN

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
15/08/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S13E)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

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GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

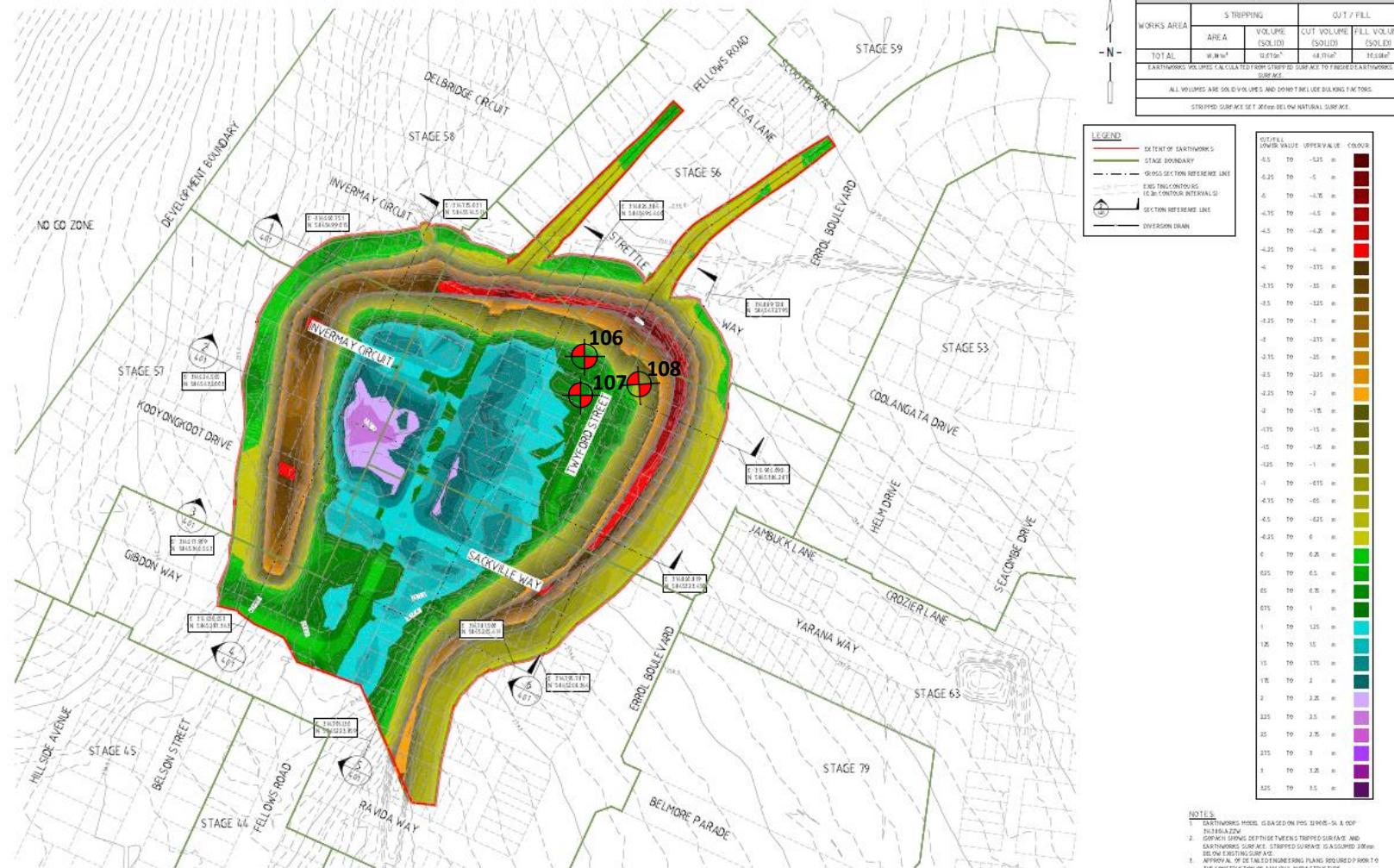
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	36
<b>Location:</b>	Mickleham				
Sample No	106	107	108		
Date Tested	16/08/2023	16/08/2023	16/08/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	3	3	4		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.98	2.00		
Field Moisture Content	%	25.0	23.0		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.06	2.06		
Optimum Moisture Content	%	23	23.5		
<b>Moisture Ratio</b>	%	109	98	98.5	
<b>Moisture Variation from OMC</b>	%	2.0	-0.5	-0.5	
<b>Density Ratio</b>	%	Wetter	Drier	Drier	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI36)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	25/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="flex-grow: 1;"> <p><b>NATA</b> WORLD RECOGNISED ACCREDITATION</p> <p><b>NATA Accredited Laboratory No. 20172</b> Accreditation for compliance with ISO/IEC 17025 - Testing</p> </div> <div> <p>Approved Signatory:</p>  </div> <div> <p>David Burns 25/08/2023</p> </div> </div>					





## Test Location



			J.BARCELO	
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	REMARKS:	
REV	DESCRIPTION	APPROVED:	DATE:	G.ROMANZ



15845 2021-001-A10

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**CONSTRUCTION** 366 F1 PROJECT # 17040-54 CONTRACT # EW301 PERIOD 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

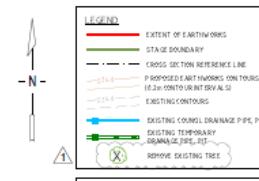
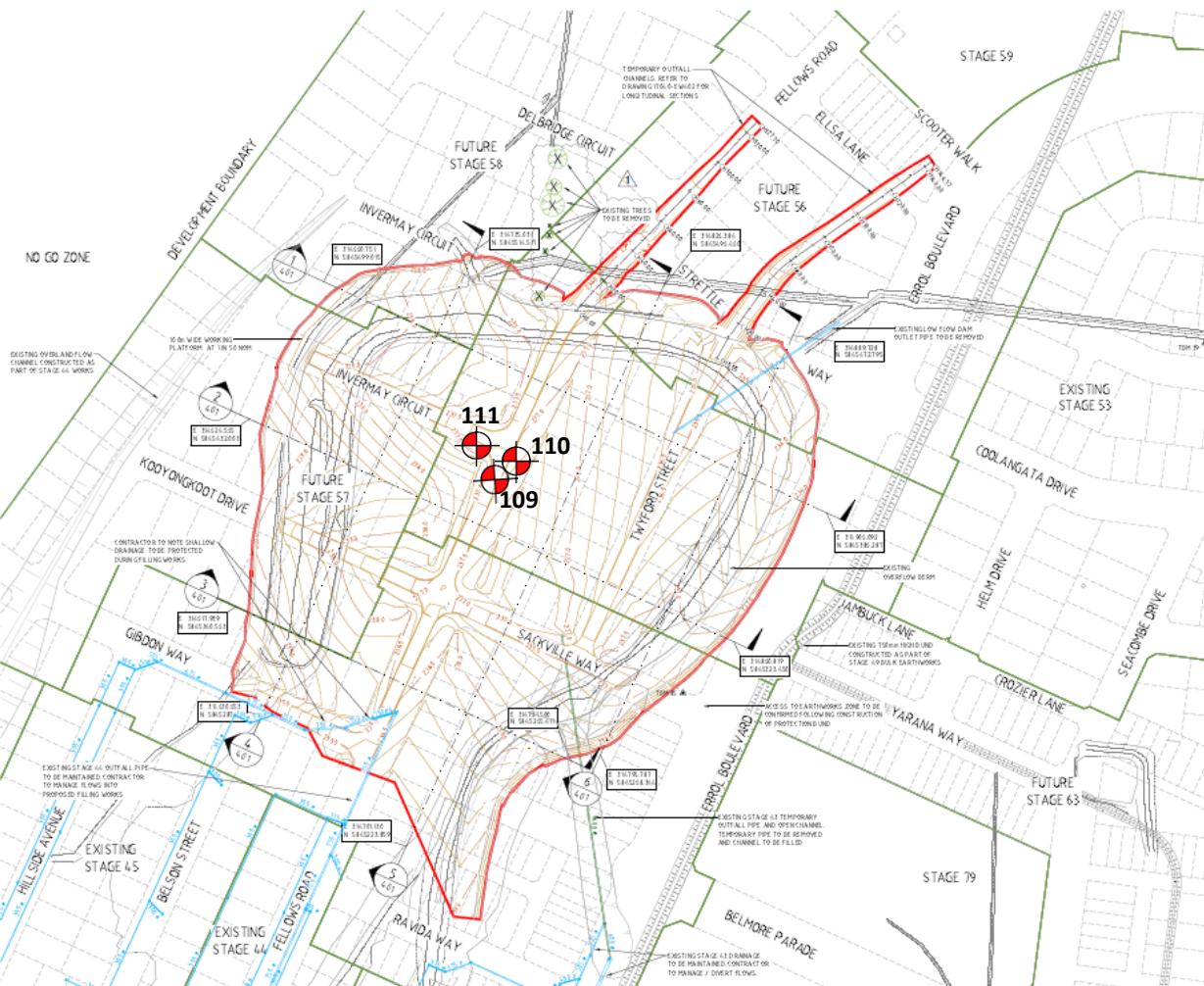
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	37			
<b>Location:</b>	Mickleham							
Sample No	109	110	111					
Date Tested	17/08/2023	17/08/2023	17/08/2023					
Time Tested	AM	AM	AM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	3	3	3					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.97	2.00					
Field Moisture Content	%	24.7	25.3					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	2.05	2.05					
Optimum Moisture Content	%	22.5	23					
<b>Moisture Ratio</b>	%	110	110	108				
<b>Moisture Variation from OMC</b>	%	2.0	2.0	2.0				
<b>Density Ratio</b>	%	Wetter	Wetter	Wetter				
		96.0	97.0	98.5				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI37)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023								



Test Location



**NOTE:**  
EARTHWORKS CONSTRUCTION LEVEL  
TOLERANCE IS TO BE +/- 4mm / +/- 5mm  
FROM THE DESIGN LEVELS

**NOTE:**

- FOR TIME OF DAY / POSITION OF WORK REFER TO VERIS CONTROL PLAN FOR THE DAY / POSITION TO PLAN AS PER CONTRACT.
- CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINAGE AND PITS WITHIN LIMIT OF WORKS.
- ALL EXISTING CONSTRUCTION LEVELS AND LEVELS TAKEN BY SURVEYOR PRIOR TO PLACEMENT OF FILL FILL TO BE LEVEL AS PER GEOTECHNICAL ADVICE, AND SUPERINTENDENTS STRUCTURE REPORT TO BE PROVIDED.

		J BARCELO	H 1:1000 A1	merrfield <b>verve</b> MAB GPC	HUME CITY COUNCIL MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS LAYOUT PLAN
1. TREES TO BE REMOVED	LAPAP	F10.21			CONSTRUCTION	366 F1
6. CONSTRUCTION ISSUE	LAPAP	A40.21	APPROVED	G ROMANZ	DATE	17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
17/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI37)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



# Field Density Test Results

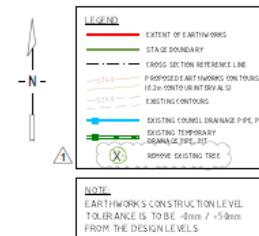
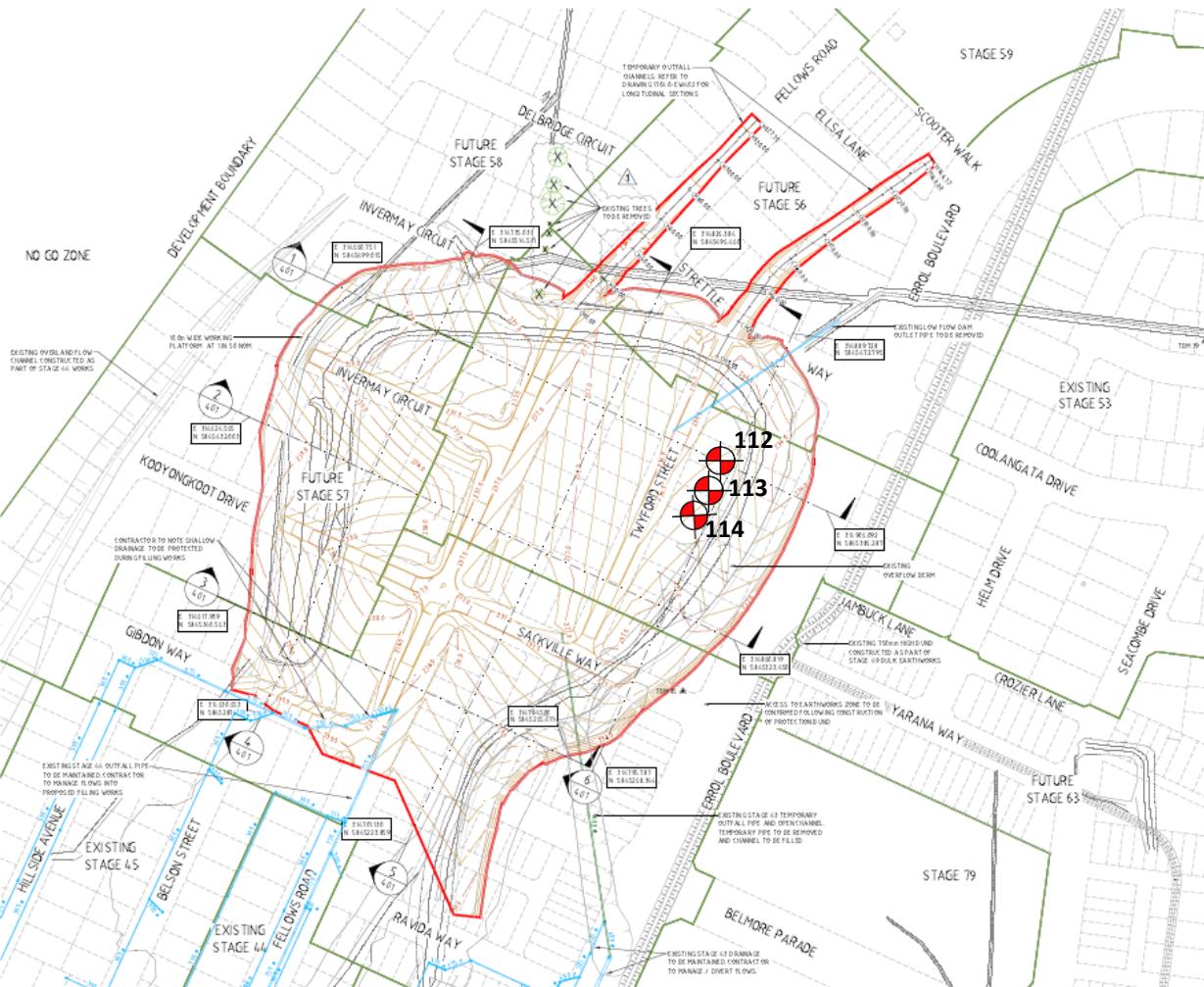
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	38			
<b>Location:</b>	Mickleham							
Sample No	112	113	114					
Date Tested	21/08/2023	21/08/2023	21/08/2023					
Time Tested	PM	PM	PM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	4	4	4					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.94	1.82					
Field Moisture Content	%	27.5	24.1					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	1.88					
Optimum Moisture Content	%	28	22.5					
<b>Moisture Ratio</b>	%	98.5	107	109.5				
<b>Moisture Variation from OMC</b>	%	-0.5	1.5	2.0				
<b>Density Ratio</b>	%	Drier	Wetter	Wetter				
		96.0	97.0	98.5				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI38)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/08/2023								



Test Location



**NOTE:**

- FOR TIME OF DAY / POSITION OF WORK REFER TO VERIS CONTROL PLAN FOR EARTHWORKS TIMING AND AREA.
- CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINAGE AND PITS WITHIN LIMIT OF WORKS.
- ALL EXISTING DRAINS, DRAINS AND LEVELS TAKEN BY SURVEYORS PRIOR TO PLACEMENT OF FILL FILL TO BE LEVEL AS PER GEOTECHNICAL ADVICE AND SUPERINTENDENTS STRUCTURE REPORT TO BE PROVIDED.

		J BARCELO	H1:1000 A1
		J BARCELO	
		J BARCELO	
1. TREES TO BE REMOVED	LAPAP	F10.21	
6. CONSTRUCTION ISSUE	LAPAP	A40.21	
REV DESCRIPTION	APPROVED DATE	G ROMANCZ	



HUME CITY COUNCIL		
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		
BULK EARTHWORKS LAYOUT PLAN		
CONSTRUCTION	366 F1	PROJECT No. 17040-54
REVISION	EW201	1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
21/08/2023

**LOCATION:**  
Mickleham

**PROJECT No.:**  
1120 0428-1 (S138)

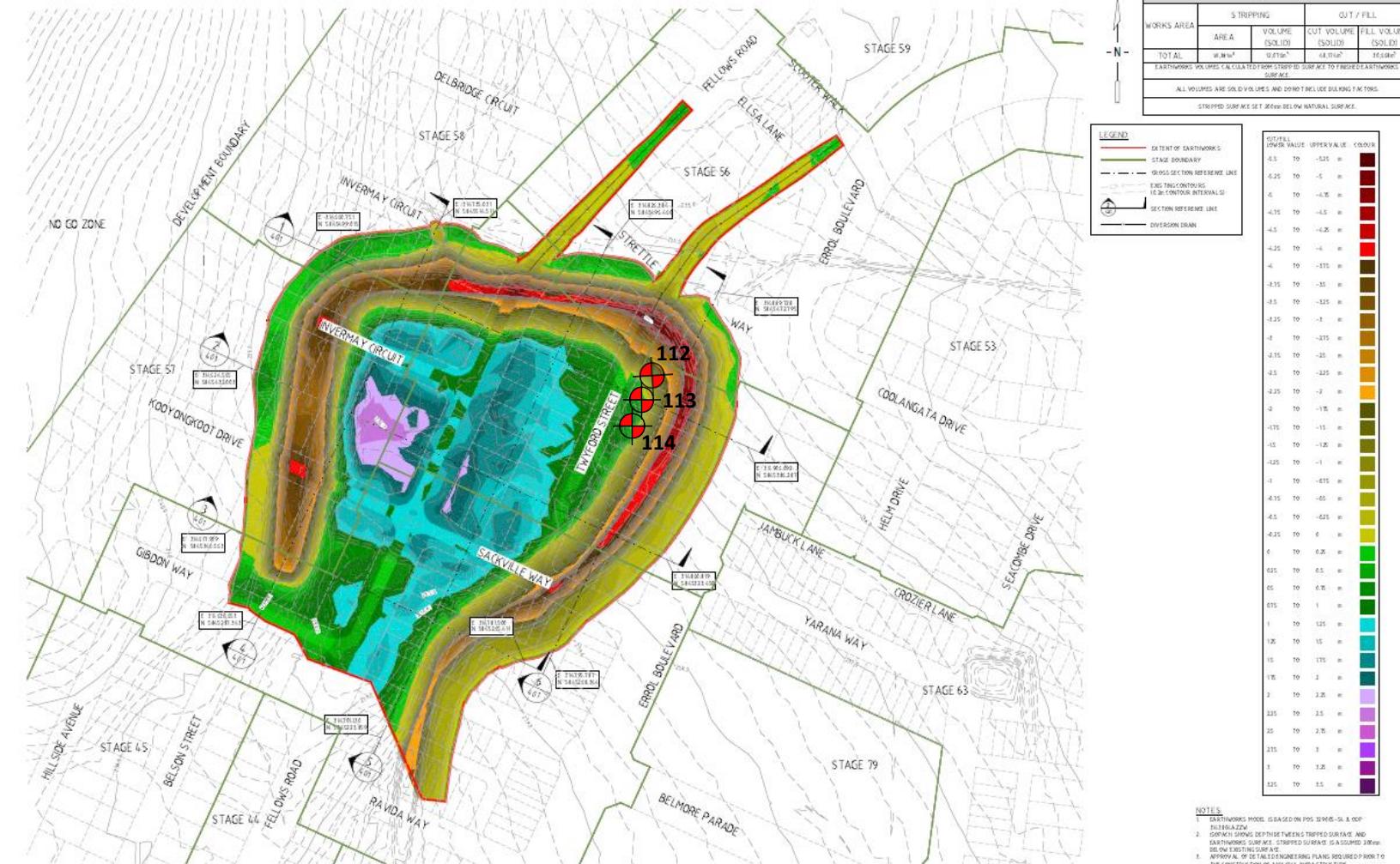
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
<b>CONSTRUCTION</b>	BULK EARTHWORKS ISOPACH PLAN
366 F1	17040-54
EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (S138)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

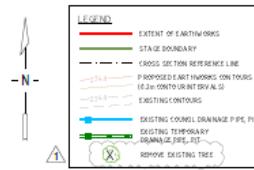
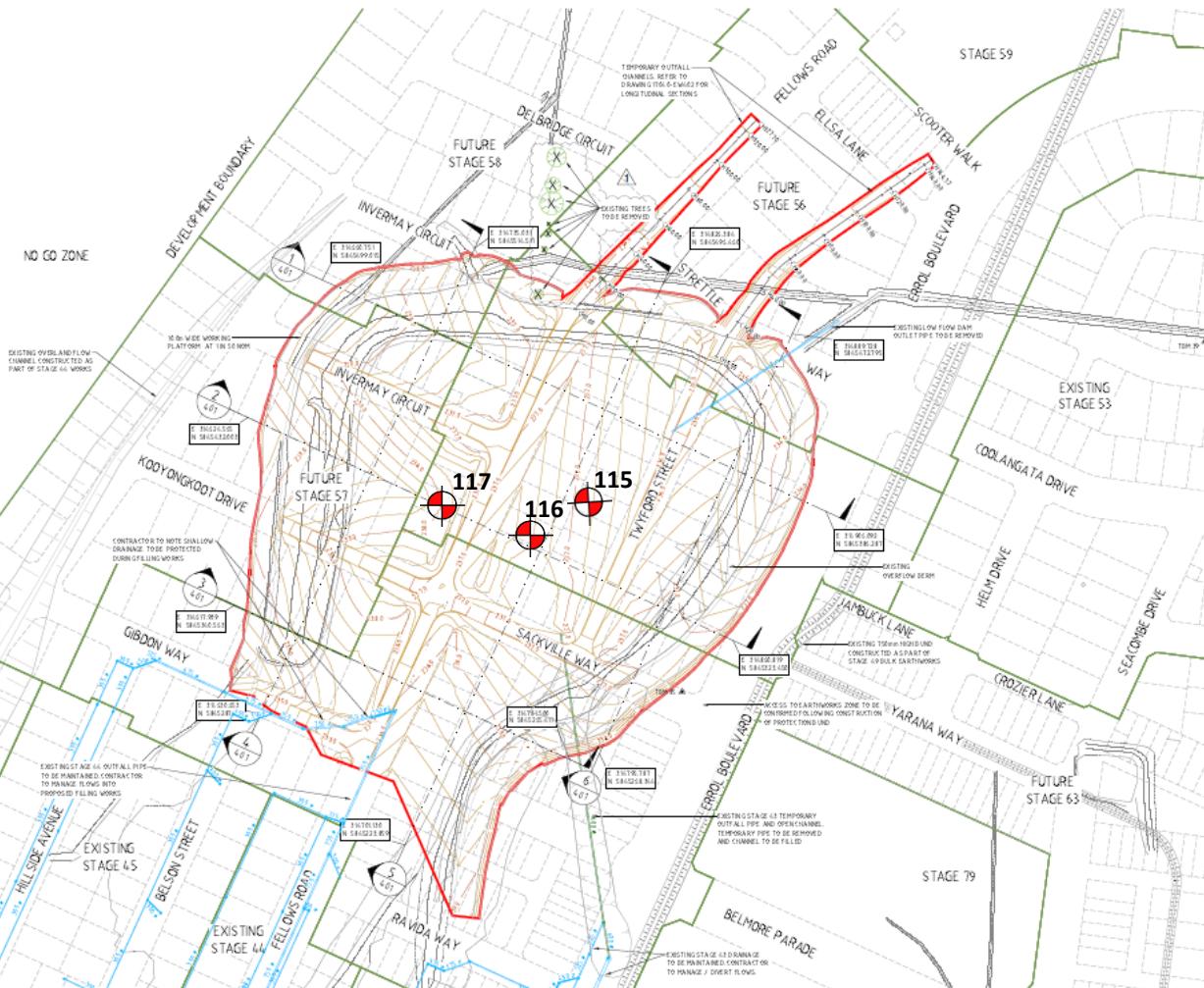
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	39			
<b>Location:</b>	Mickleham							
Sample No	115	116	117					
Date Tested	22/08/2023	22/08/2023	22/08/2023					
Time Tested	PM	PM	PM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	6	6	7					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.94	1.99					
Field Moisture Content	%	24.3	21.2					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	1.98	2.05					
Optimum Moisture Content	%	24.5	21.5					
<b>Moisture Ratio</b>	%	99	98.5					
<b>Moisture Variation from OMC</b>	%	0.0	-0.5					
<b>Density Ratio</b>	%	OMC	Drier					
		98.5	97.0					
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI39)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns Date: 25/08/2023								



Test Location



NOTE:  
EARTHWORKS CONSTRUCTION LEVEL  
TOLERANCE IS TO BE +/- 5mm / +/- 5mm  
FROM THE DESIGN LEVELS

NOTE 3  
1. THAT THE CONTRACTOR REPORTS TO VERVE CONTROL  
2. THAT THE CONTRACTOR REPORTS TO MERRIFIELD ESTATE PLANNING & DEVELOPMENT

2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING  
3. ALL UNCATALOGUED MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEYORS PRIOR TO PLACEMENT OF FILL FILL TO BE LEVEL AS PER CONTRACTUAL ADVISE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

		J BARCELO
REVISED		J BARCELO
APPROVED	LAPAP	LAPAP
REV. DESCRIPTION		G ROMANCZ
DATE		

H 1:1000 0 10 20 40 60 80



HUME CITY COUNCIL		
PROJECT	MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS LAYOUT PLAN
REF	CONSTRUCTION	366 F1 PROJECT NO. 17040-54 EW201 1

PROJECT:  
Merrifield Estate – Section D – Stage 54 (Level 1)

CLIENT:  
BMD Urban

DATE:  
22/08/2023

LOCATION:  
Mickleham

PROJECT No:  
1120 0428-1 (S139)

SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANCZ
REV	DESCRIPTION	APPROVED	DATE	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
<b>CONSTRUCTION</b>	BULK EARTHWORKS ISOPACH PLAN
366 F1	17040-54
EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S138)**

SITE PLAN SKETCH=NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

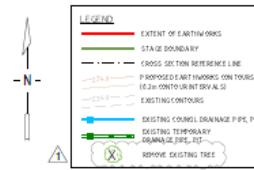
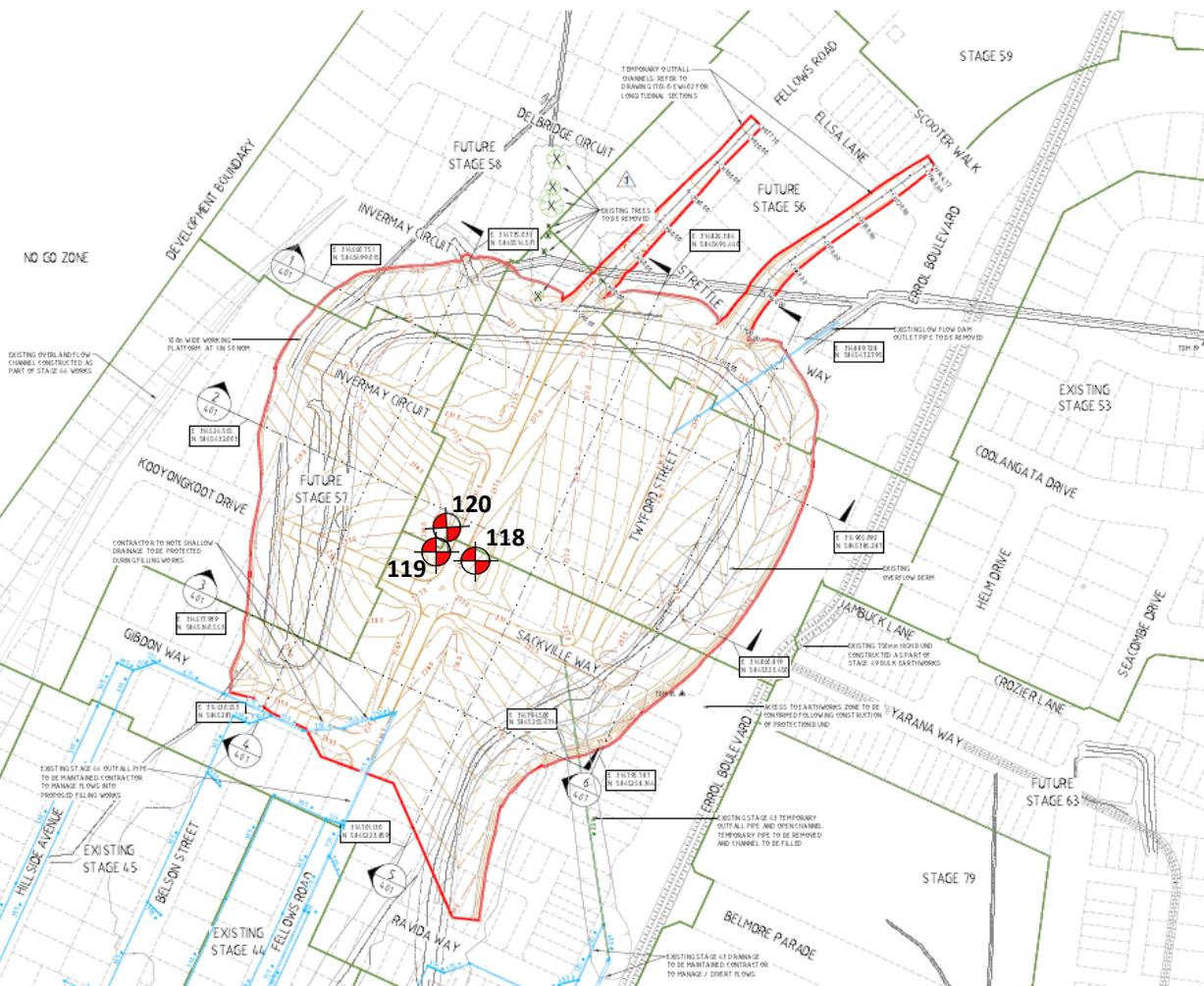
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	40
<b>Location:</b>	Mickleham				
Sample No	118	119	120		
Date Tested	25/08/2023	25/08/2023	25/08/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	5	5	6		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	2.05	1.98		
Field Moisture Content	%	23.8	18.9		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.13	2.03		
Optimum Moisture Content	%	24	19.5		
<b>Moisture Ratio</b>	%	99	97	108.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	2.0	
<b>Density Ratio</b>	%	Drier	Drier	Wetter	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI40)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	30/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



Test Location



**NOTE:**  
EARTHWORKS CONSTRUCTION LEVEL  
TOLERANCE IS TO BE +/- 5mm / +/- 50mm  
FROM THE DESIGN LEVELS

**NOTE 3:**

- THE TOP OF TIN / POINTS TO REFERENCE REFER TO VERTIS CONTROL PLAN (MERRIFIELD TIN AND TIN PLAN, J.W. 2023).
- CONTRACTORS TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINS, WATER MAINS, GAS MAINS, TELECOMS, ETC.
- ALL UNCASTABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEYORS PRIOR TO PLACEMENT OF FILL FILL TO BE LEVEL AS PER CONTRACTUAL ADVISE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

		J BARCELO
NAME		J BARCELO
GRADE		LAPAP
APPROVED		G ROMANCZ
REV DESCRIPTION		APPROVED DATE

H 1:1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waterberry Road,  
Mickleham VIC 3342  
TEL: 03 8573 1500 verveprojects.com  
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**HUME CITY COUNCIL**  
**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**  
**BULK EARTHWORKS LAYOUT PLAN**  
**CONSTRUCTION** 366 F1 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
25/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI40)

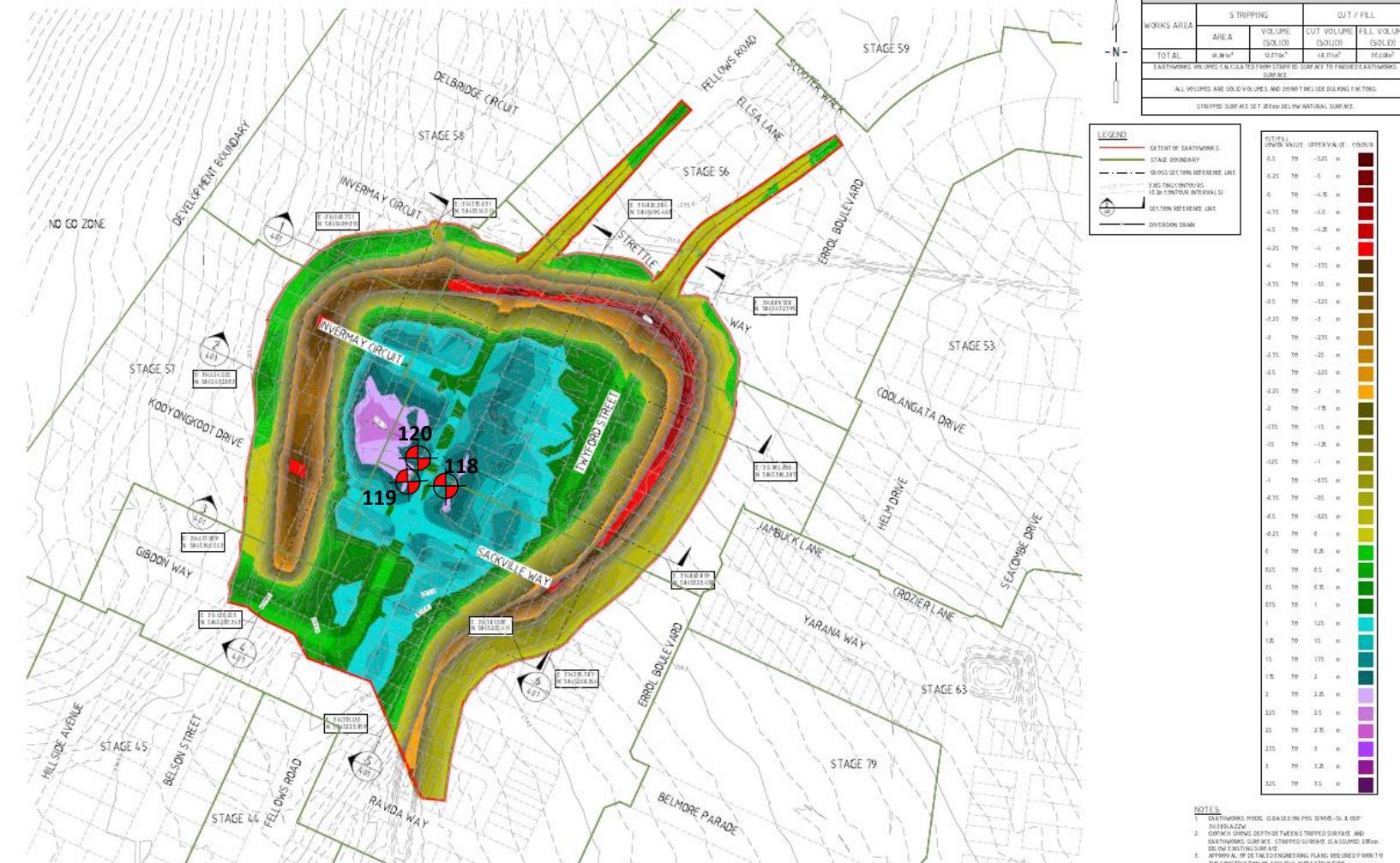
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	REF ID: 366 F1
REF ID: 17040-54	REF ID: EW301
REF ID: 0	REF ID: 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (SI40)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

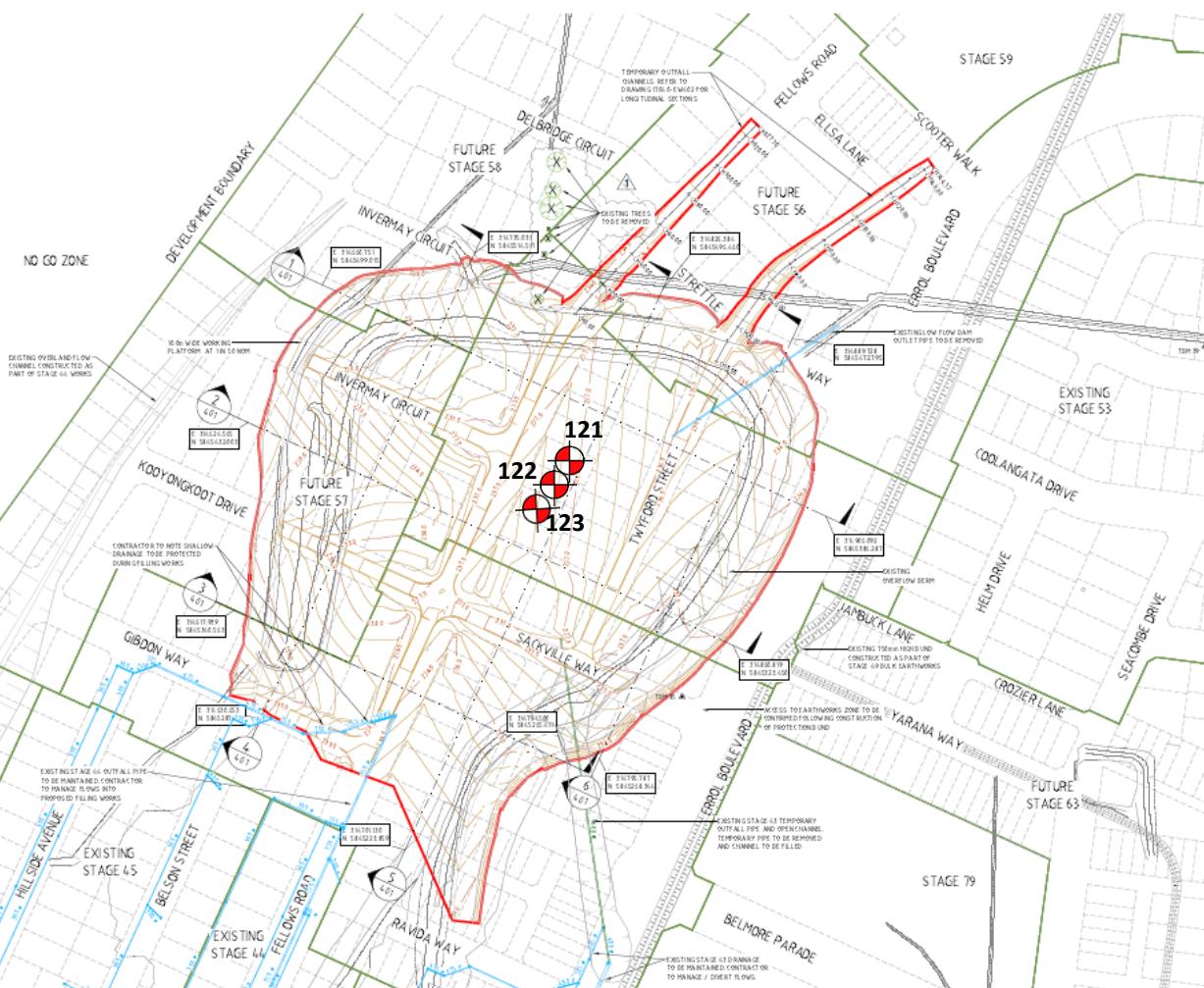
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	41			
<b>Location:</b>	Mickleham							
Sample No	121	122	123					
Date Tested	28/08/2023	28/08/2023	28/08/2023					
Time Tested	PM	PM	PM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	8	8	8					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.96	1.91					
Field Moisture Content	%	22.9	23.9					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	2.04	1.97					
Optimum Moisture Content	%	23.5	22					
<b>Moisture Ratio</b>	%	97.5	108.5					
<b>Moisture Variation from OMC</b>	%	-1.0	2.0					
<b>Density Ratio</b>	%	Drier	Wetter					
		96.0	97.0					
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI41)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns Date: 30/08/2023								



Test Location



1. TREES TO BE REMOVED	LAPAP	J BARCELO
2. CONSTRUCTION ISSUE	LAPAP	J BARCELO
REV DESCRIPTION	APPROVED DATE	APPROVED DATE

H 1:1000 0 10 20 40 60 80

**merrifield**  
**MAB GPC**
**verve**  
Ground Floor, 207-213 Waterberry Road,  
Mickleham East VIC 3342  
TEL: 03 8573 1500 verveprojects.com  
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**HUME CITY COUNCIL**  
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM  
BULK EARTHWORKS LAYOUT PLAN  
CONSTRUCTION  
REF ID: 366 F1 PROJECT ID: 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
28/08/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI41)

**SITE PLAN SKETCH—NOT TO SCALE**

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S141)**

SITE PLAN SKETCH—NOT TO SCALE



# **A&Y ASSOCIATES**

---

**GEOTECHNICAL ENGINEERING CONSULTANTS**

# Field Density Test Results

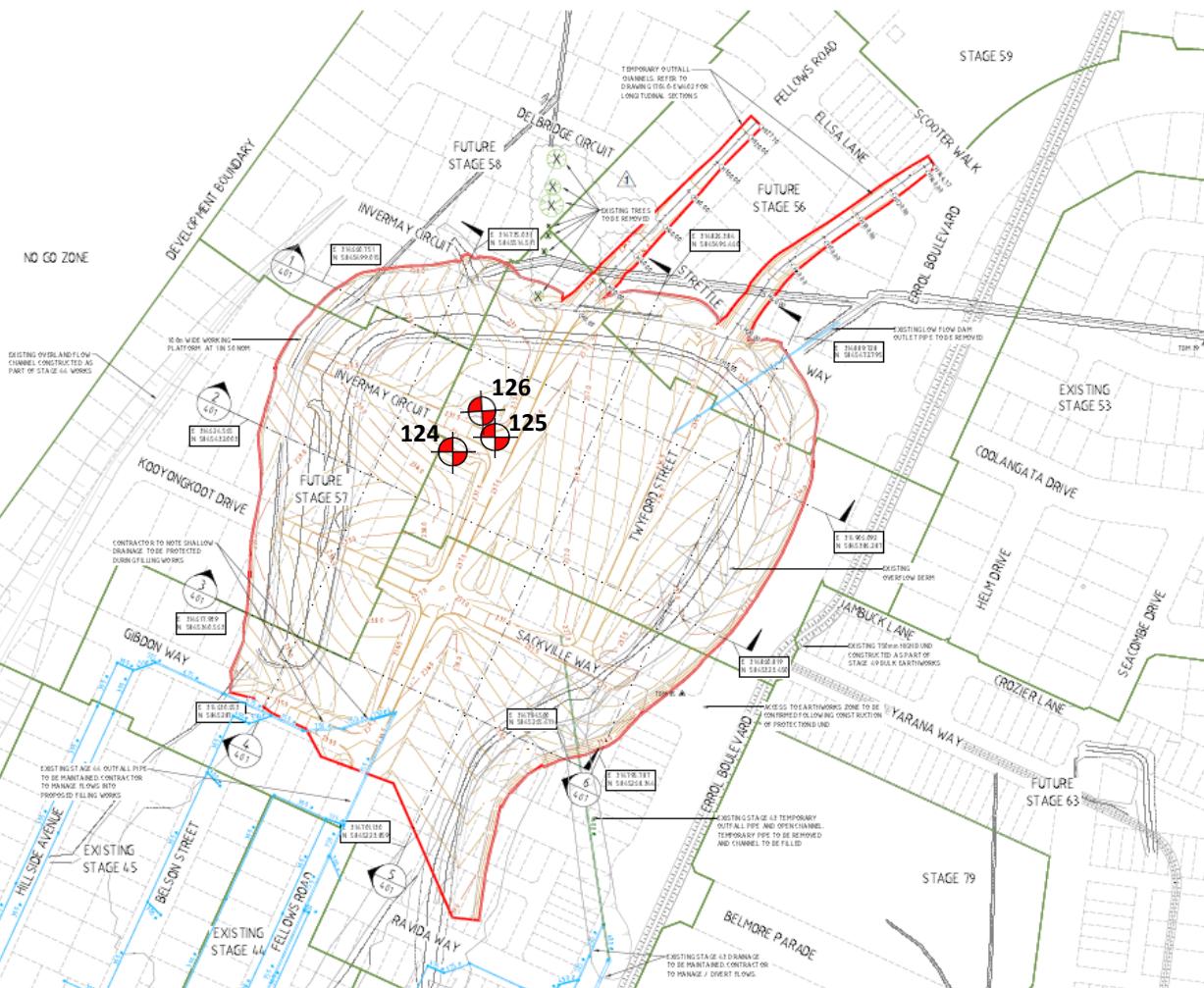
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	42
<b>Location:</b>	Mickleham				
Sample No	124	125	126		
Date Tested	29/08/2023	29/08/2023	29/08/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		6	6	7	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.92	1.90	2.07	
Field Moisture Content	%	22.7	23.0	24.1	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.00	1.95	2.13	
Optimum Moisture Content	%	23	21	24.5	
<b>Moisture Ratio</b>	%	98.5	109.5	98.5	
<b>Moisture Variation from OMC</b>	%	-0.5	2.0	-0.5	
<b>Density Ratio</b>	%	Drier	Wetter	Drier	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI42)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 30/08/2023					



Test Location



REV. DESCRIPTION	APPROVED DATE	J. BARCELO
		J. BARCELO
		LAPAP
		G. ROMANCZ

H 1:1000 0 10 20 30 40 50 60 70 80

**merrfield**  
**MAB GPC**
**verve**  
Ground Floor, 207-213 Waterberry Road,  
Mickleham VIC 3342  
TEL: 03 8573 1500 verveprojects.com  
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**HUME CITY COUNCIL**  
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM  
BULK EARTHWORKS LAYOUT PLAN  
CONSTRUCTION  
REF ID: 366 F1 PROJECT ID: 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
29/08/2023

**LOCATION:**  
Mickleham

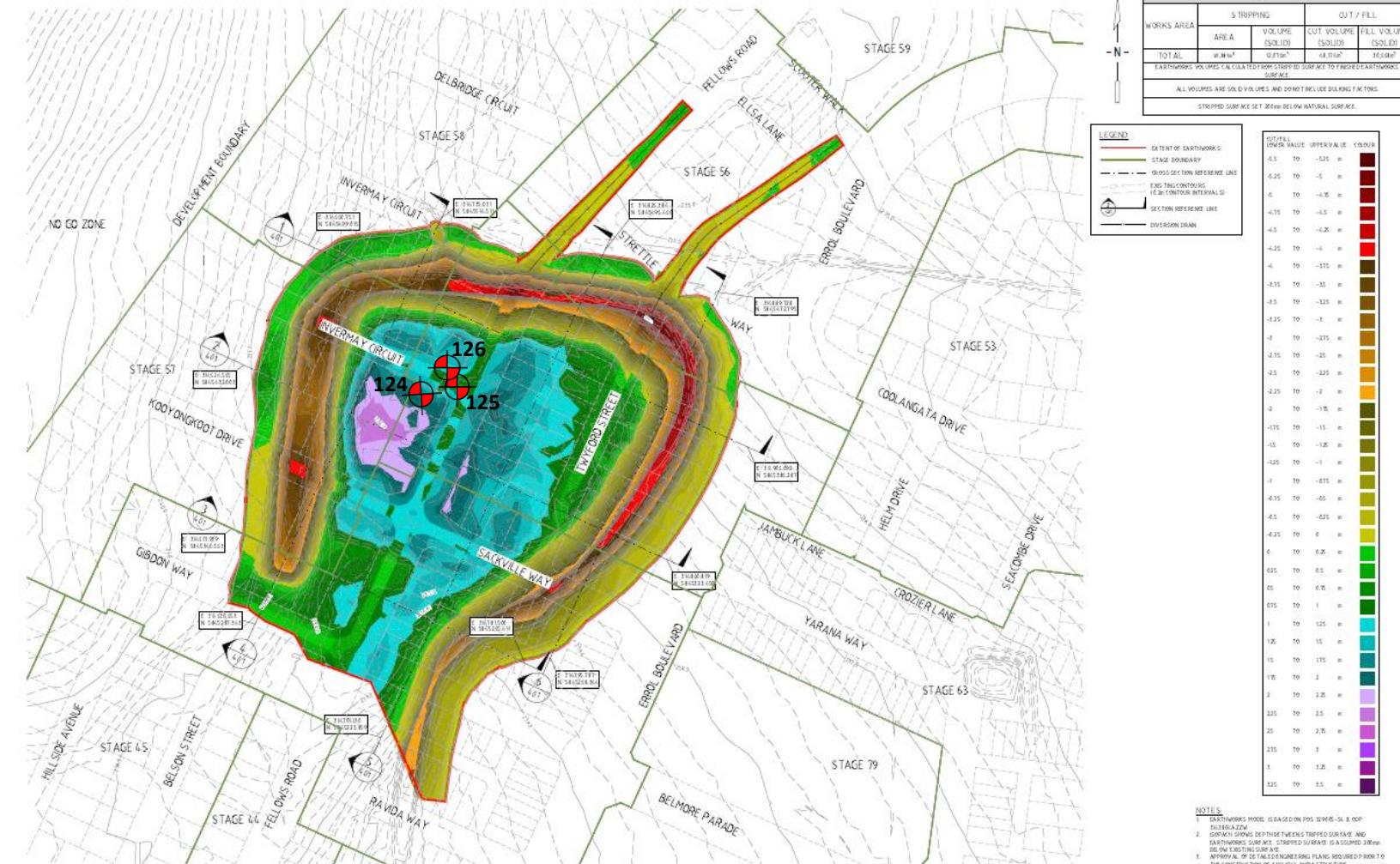
**PROJECT No:**  
1120 0428-1 (SI42)

SITE PLAN SKETCH—NOT TO SCALE


**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
29/08/2023

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (SI42)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

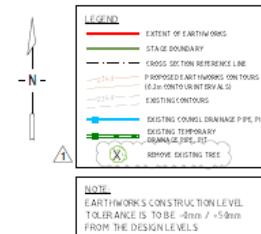
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	43
<b>Location:</b>	Mickleham				
Sample No	127	128	129		
Date Tested	30/08/2023	30/08/2023	30/08/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	7	6	7		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.99	2.03		
Field Moisture Content	%	24.0	25.3		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	2.06		
Optimum Moisture Content	%	25	26		
<b>Moisture Ratio</b>	%	96	97.5	109.5	
<b>Moisture Variation from OMC</b>	%	-1.0	-0.5	2.0	
<b>Density Ratio</b>	%	Drier	Drier	Wetter	
		98.5	98.5	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI43)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	31/08/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



## Test Location



**NOTES:**

1. FOR TBIM SETOUT J. CONT ROL INFORMATION REFER TO VERSIT CONTROL PLAN MISERFIELD TBIM HAG TIER PLAN, Jan 2022
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINAGE AND PITS WITHIN LIMIT OF WORKS.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKE DRY SURVEY UP PRIOR TO PLACEMENT OF FILL. FILL TO BE LEVEL AS PER GEOTECHNICAL ADVISE AND SUPERINTENDENTS INSTRUCTION. REPORT TO BE PROVIDED.

			JBAR
			DISCUSSION
			JBAR
			DISCUSSION
1	TREES TO BE REMOVED	LAP/TP	10/10/21
2	RECONSTRUCTION ISSUE	LAP/TP	10/10/21
3	removal	minimum RATE	G.R.O.

H 1 : 1000 0 10 20 40 60 80



**verve**  
Ground Floor, 207-213 Waverley  
Malvern East VIC 3144  
[03 5271 1200](tel:0352711200) [www.verve.com.au](http://www.verve.com.au)

Page 1 of 1

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

CONSTRUCTION

## DUKE EARTHWORKS LAYOUT PLAN

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
30/08/2023

**LOCATION:**

**PROJECT No:**  
**1130 0428-1 (S113)**

SITE PLAN SKETCH=NOT TO SCALE



# **A&Y ASSOCIATES**

GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



11.8.15 0274 0281 010

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

<b>CONSTRUCTION</b>	366 F1	17040-54	EW301	0
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**NOTES:**

1. EARTHWORKS MODEL IS BASED ON POS. 12905-51 & 00P-111612ZM.
2. 10CM SHOWS DEPTH BETWEEN STRIPPED SURFACE AND EARTHWORKS SURFACE. STRIPPED SURFACE IS ASSUMED 10cm BELOW EXISTING SURFACE.
3. APPROVAL OF DETAILED ENGINEERING PLANS REQUIRED P 080810Z JUN 2000 FOR THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE.

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
30/08/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S143)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	44			
<b>Location:</b>	Mickleham							
Sample No	130	131	132					
Date Tested	31/08/2023	31/08/2023	31/08/2023					
Time Tested	AM	AM	AM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	7	8	8					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.92	1.93	2.00				
Field Moisture Content	%	22.9	21.2	22.8				
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0	0.0				
Sieve Size	mm	19	19	19				
Peak Converted Wet Density	t/m <sup>3</sup>	1.95	1.97	2.06				
Optimum Moisture Content	%	21	19.5	23.5				
<b>Moisture Ratio</b>	%	109	108.5	97				
<b>Moisture Variation from OMC</b>	%	2.0	1.5	-0.5				
<b>Density Ratio</b>	%	Wetter	Wetter	Drier				
		98.5	97.5	97.0				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI44)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns Date: 01/09/2023								



Test Location



		J BARCELO
NAME		J BARCELO
GRADE		LAPAP
APPROVED		G ROMANZ
REV DESCRIPTION		APPROVED DATE

H 1:1000 0 10 20 40 60 80

merrfield  
MAB GPC

verve  
Ground Floor, 207-213 Waterberry Road,  
Mickleham VIC 3342  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL  
PROJECT: MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM  
BULK EARTHWORKS LAYOUT PLAN  
CONSTRUCTION  
366 F1 PROJECT NO: 17040-54 EW201 1

PROJECT:  
Merrifield Estate – Section D – Stage 54 (Level 1)

CLIENT:  
BMD Urban

DATE:  
31/08/2023

LOCATION:  
Mickleham

PROJECT No:  
1120 0428-1 (SI44)

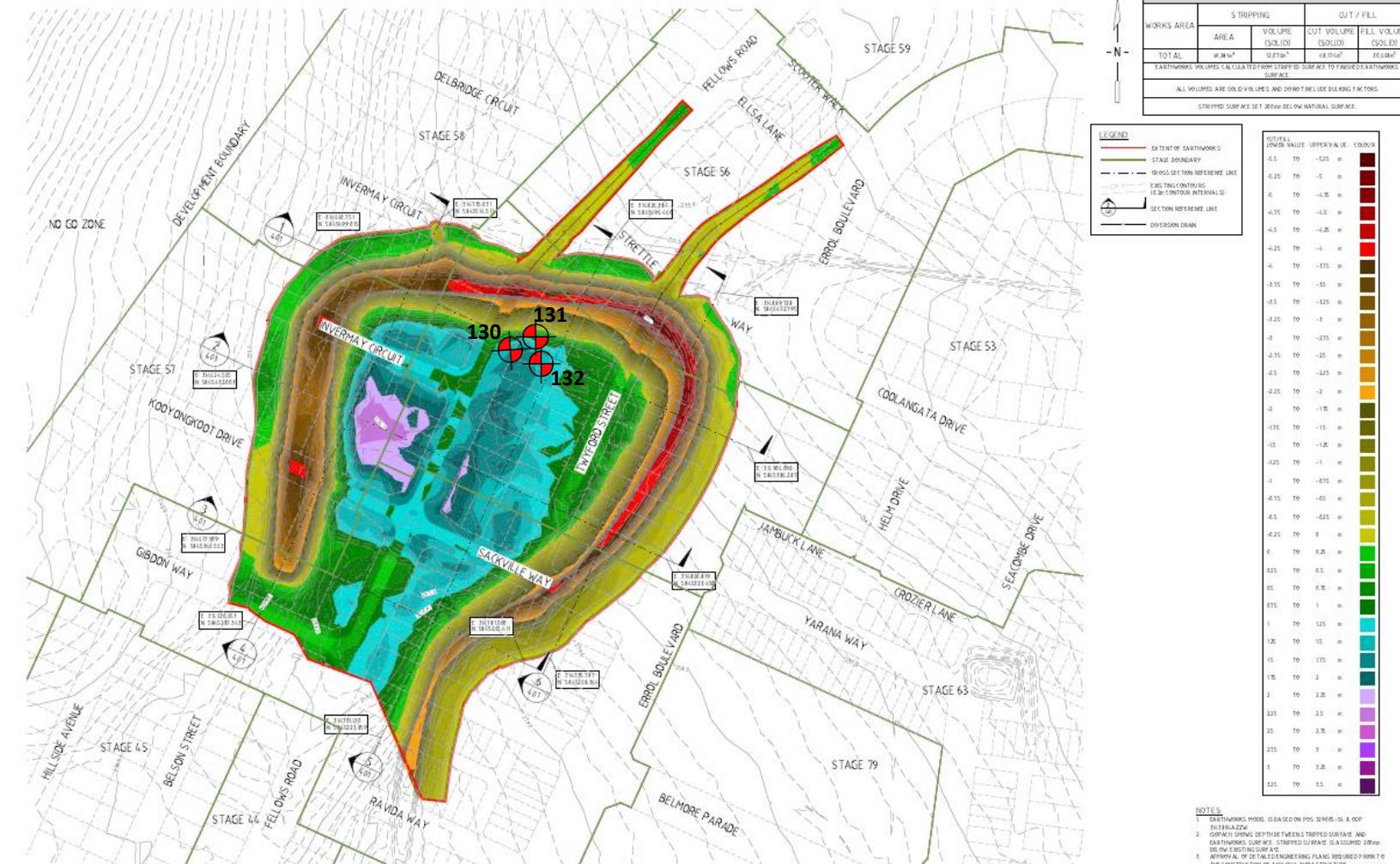
SITE PLAN SKETCH—NOT TO SCALE



A&Y ASSOCIATES  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
31/08/2023

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (S144)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

## Field Density Test Results

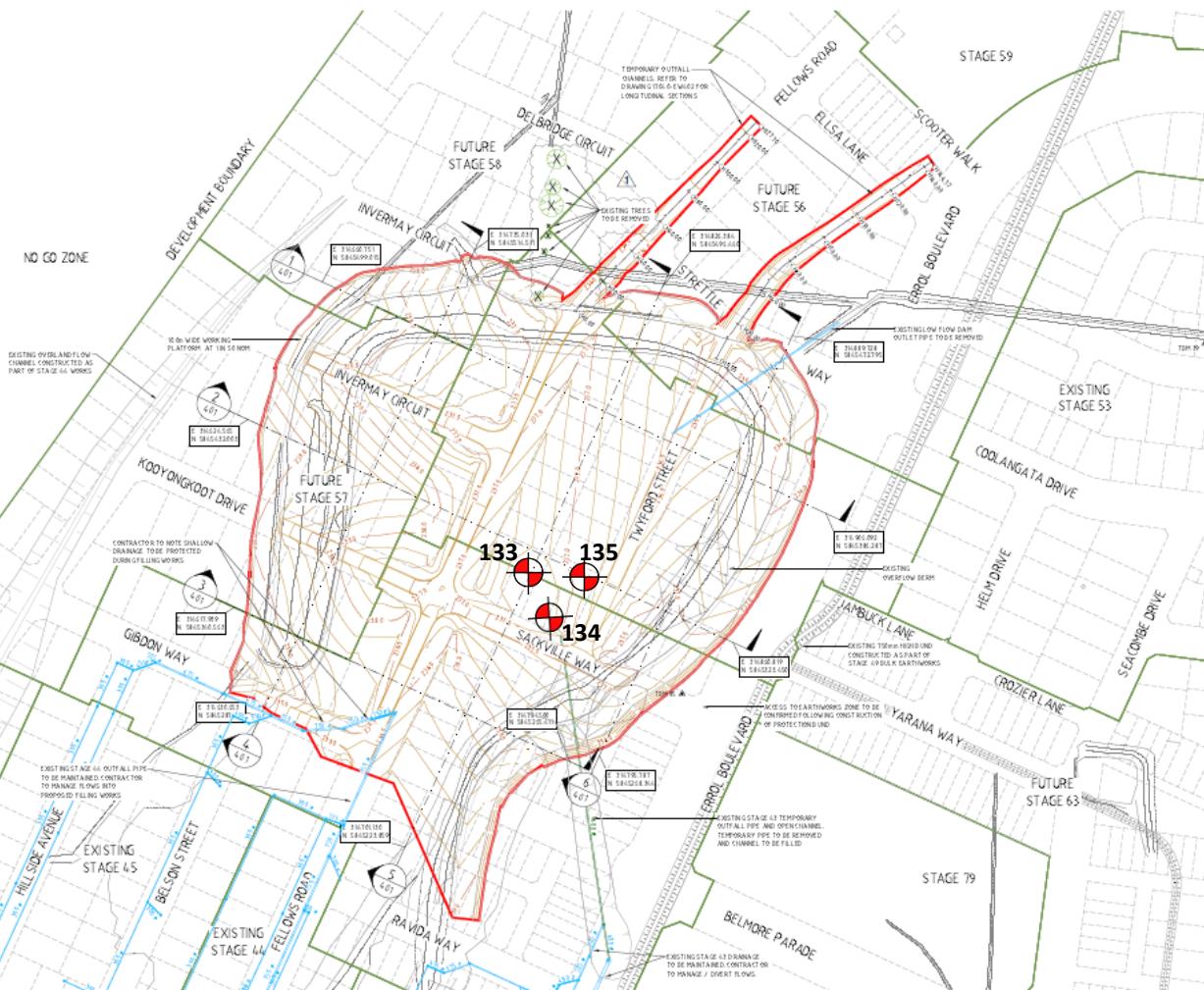
### AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923			
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	45			
<b>Location:</b>	Mickleham							
Sample No	133	134	135					
Date Tested	01/09/2023	01/09/2023	01/09/2023					
Time Tested	AM	AM	AM					
Test Location	Refer to Plan	Refer to Plan	Refer to Plan					
Level/Layer	9	8	8					
Layer Thickness	mm	200	200					
Test Depth	mm	175	175					
Field Wet Density	t/m <sup>3</sup>	1.96	1.92					
Field Moisture Content	%	22.4	25.0					
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay					
Oversize Material	WET, %	0.0	0.0					
Sieve Size	mm	19	19					
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	2.00					
Optimum Moisture Content	%	22.5	23.5					
<b>Moisture Ratio</b>	%	99.5	106.5	106.5				
<b>Moisture Variation from OMC</b>	%	0.0	1.5	2.0				
<b>Density Ratio</b>	%	OMC	Wetter	Wetter				
		97.0	96.0	97.5				
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A			
<b>Notes:</b>	Ref: 1120 0428-1 (SI45)							
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)			
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>								
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>								
<small>Approved Signatory:</small>  David Burns Date: 04/09/2023								



Test Location



		J BARCELO
NAME		J BARCELO
GRADE		LAPAP
APPROVED		G ROMANZ
REV DESCRIPTION	1	APPROVED DATE 21/02/23

H 1:1000 0 10 20 40 60 80

merrfield  
**MAB GPC**

verve  
Ground Floor, 207-213 Waterberry Road,  
Mickleham VIC 3342  
TEL: 03 8573 1500 verveprojects.com  
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HUME CITY COUNCIL  
PROJECT MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM  
BULK EARTHWORKS LAYOUT PLAN  
CONSTRUCTION  
366 F1 PROJECT NO 17040-54 EW201 1

PROJECT:  
Merrifield Estate – Section D – Stage 54 (Level 1)

CLIENT:  
BMD Urban

DATE:  
01/09/2023

LOCATION:  
Mickleham

PROJECT No:  
1120 0428-1 (SI45)

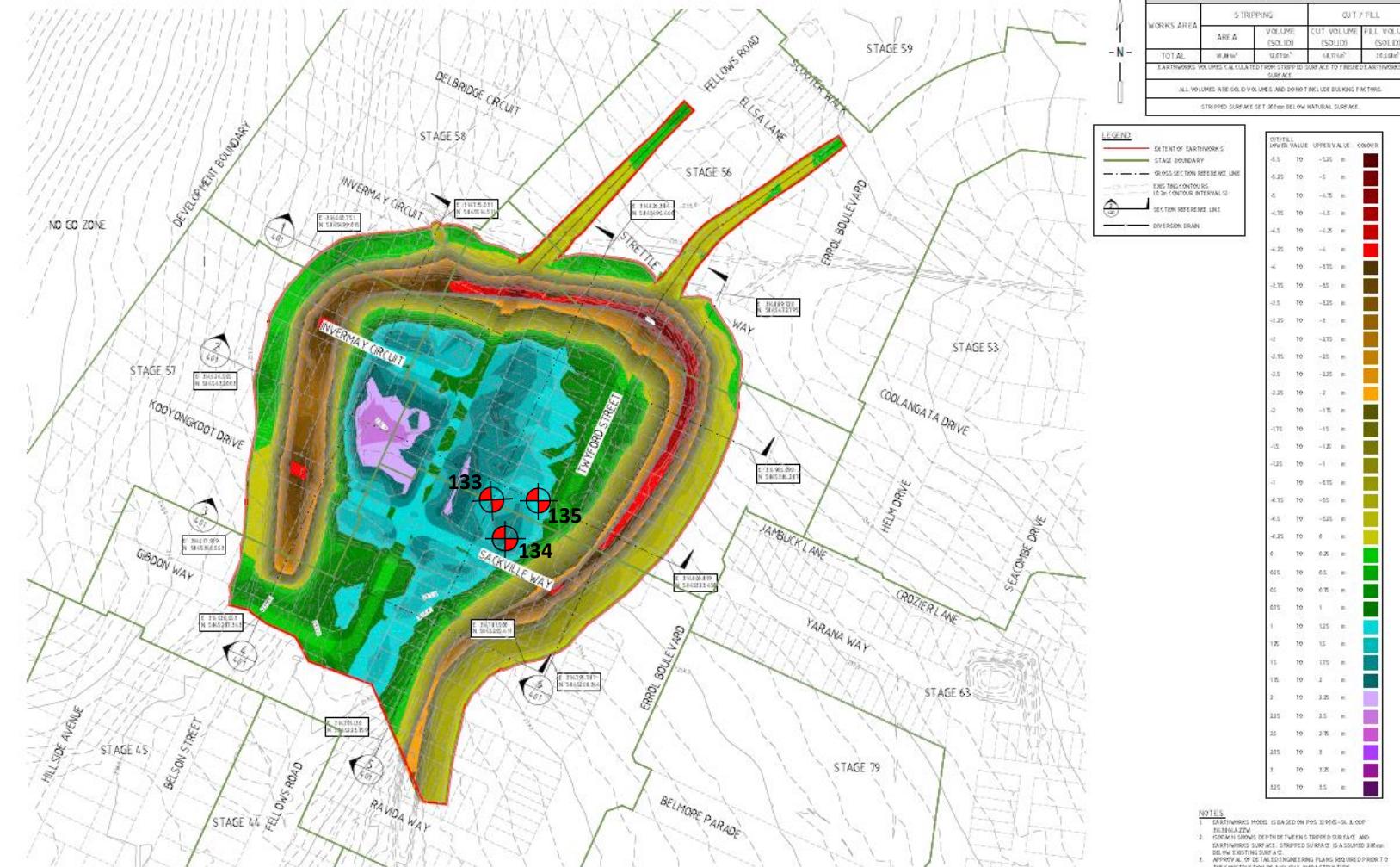
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				NAME J. BARCELO
				ADDRESS J. BARCELO
				PHONE LAPAP
2 CONSTRUCTION ISSUE	LAPAP	DATE APPROVED 04/01/21	G. ROMANZ	APPROVED BY
REV DESCRIPTION	APPROVED	DATE		

H 1:1000 0 10 20 40 60 80 100  
A1



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	366 F1
PROJECT NO.	17040-54
EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
01/09/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SME)**

SITE PLAN SKETCH—NOT TO SCALE



# **A&Y ASSOCIATES**

# Field Density Test Results

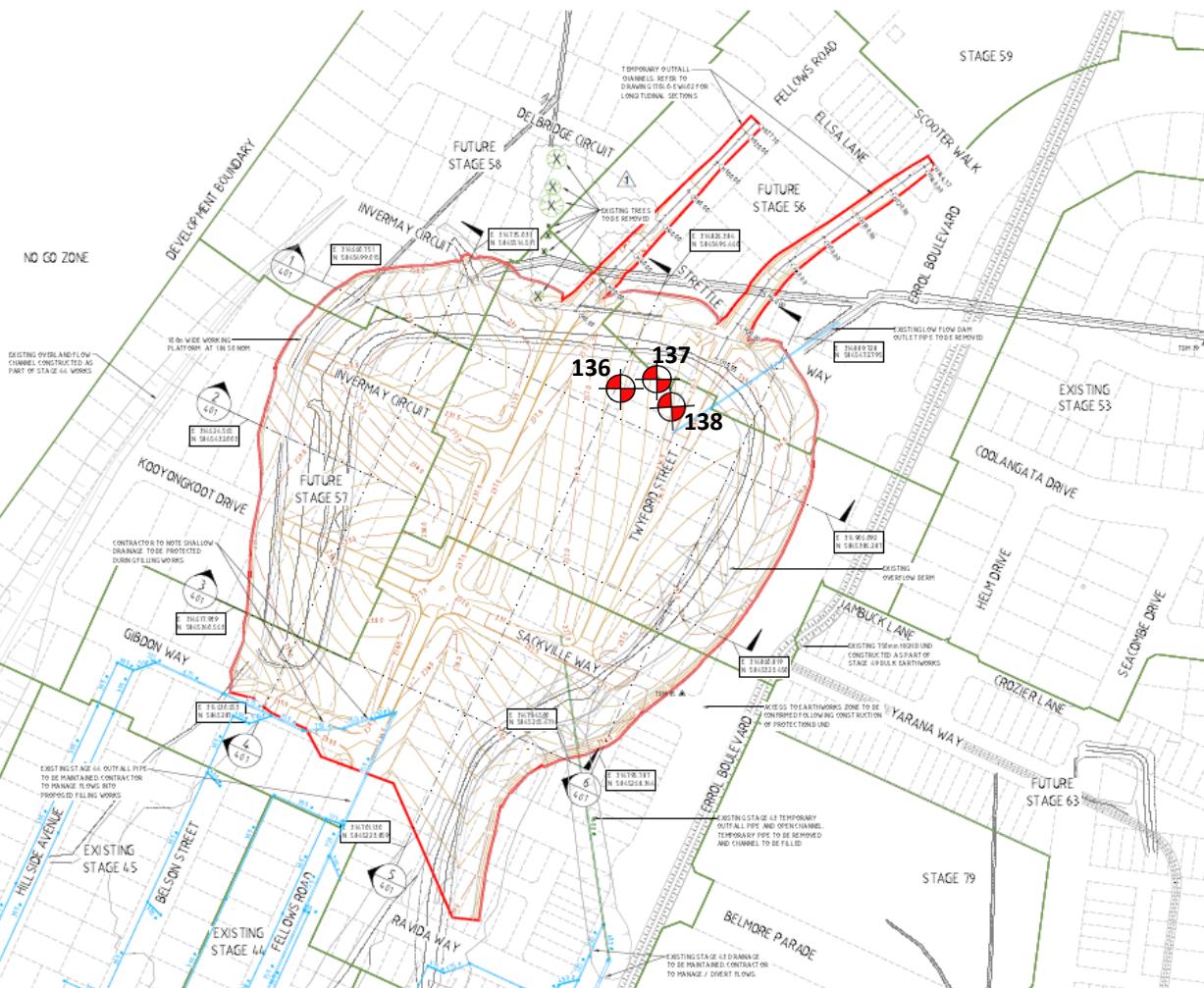
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	46
<b>Location:</b>	Mickleham				
Sample No	136	137	138		
Date Tested	04/09/2023	04/09/2023	04/09/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	3	3	4		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.95	1.99		
Field Moisture Content	%	21.2	23.3	22.4	
Material:	Imported Clay Fill	Imported Clay Fill	Imported Clay Fill		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.03	2.07	2.06	
Optimum Moisture Content	%	22	23.5	23	
<b>Moisture Ratio</b>	%	96.5	99	97.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		96.0	96.5	96.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI46)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	08/09/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



Test Location



		J BARCELO
NAME		J BARCELO
GRADE		LAPAP
APPROVED		G ROMANZ
REV DESCRIPTION		APPROVED DATE

H 1:1000 0 10 20 30 40 50 60 70 80

**merrfield**  
**MAB GPC**
**verve**  
Ground Floor, 207-213 Waterberry Road,  
Mickleham VIC 3345  
TEL: 03 8573 1500 verveprojects.com  
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**HUME CITY COUNCIL**  
PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM  
BULK EARTHWORKS  
LAYOUT PLAN  
CONSTRUCTION  
366 F1 PROJECT NO: 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
04/09/2023

**LOCATION:**  
Mickleham

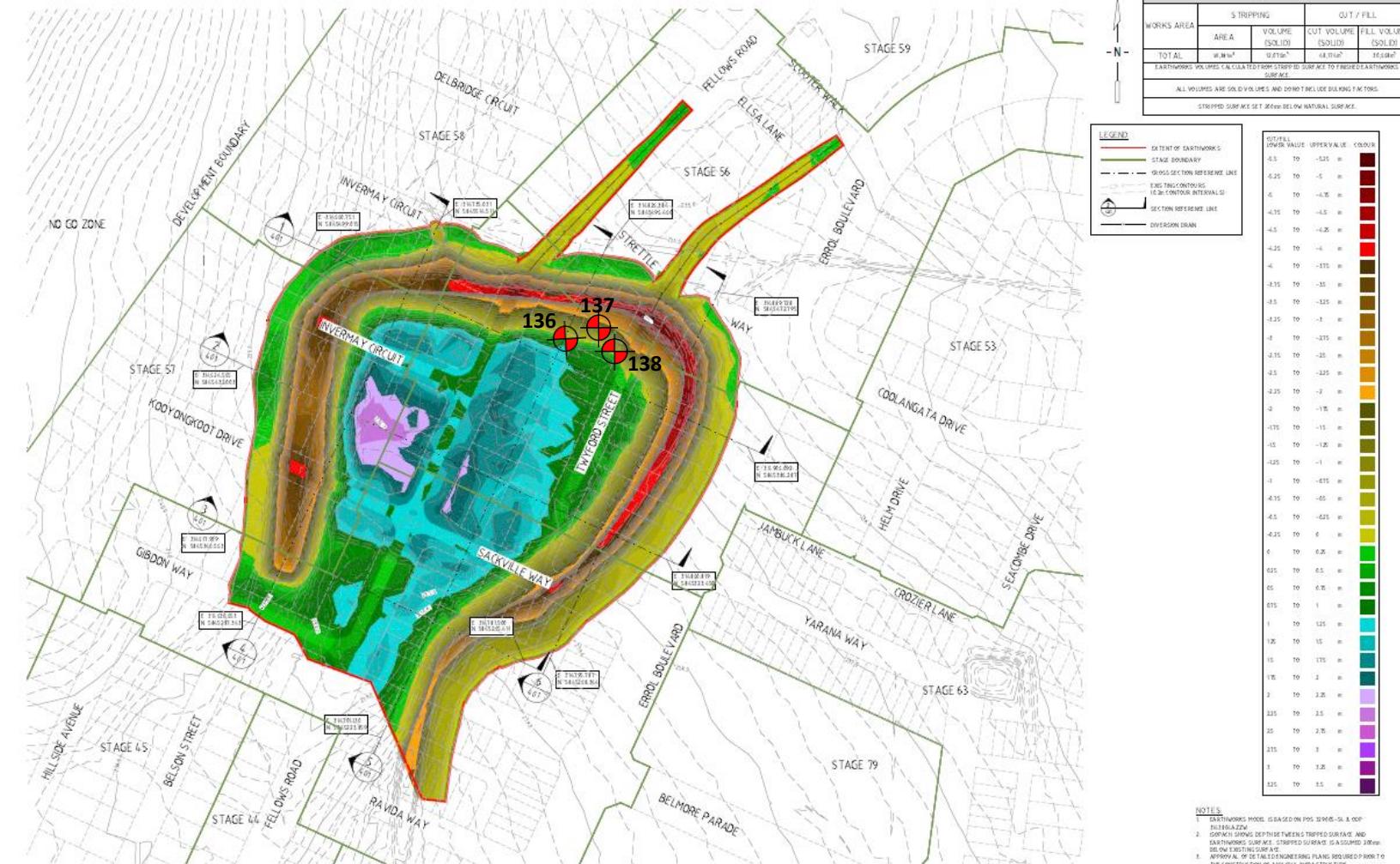
**PROJECT No:**  
1120 0428-1 (SI46)

**SITE PLAN SKETCH—NOT TO SCALE**

**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**BULK EARTHWORKS  
ISOPACH PLAN**

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0438 1 (SI46)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

## Field Density Test Results

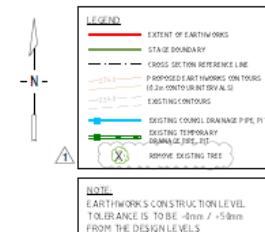
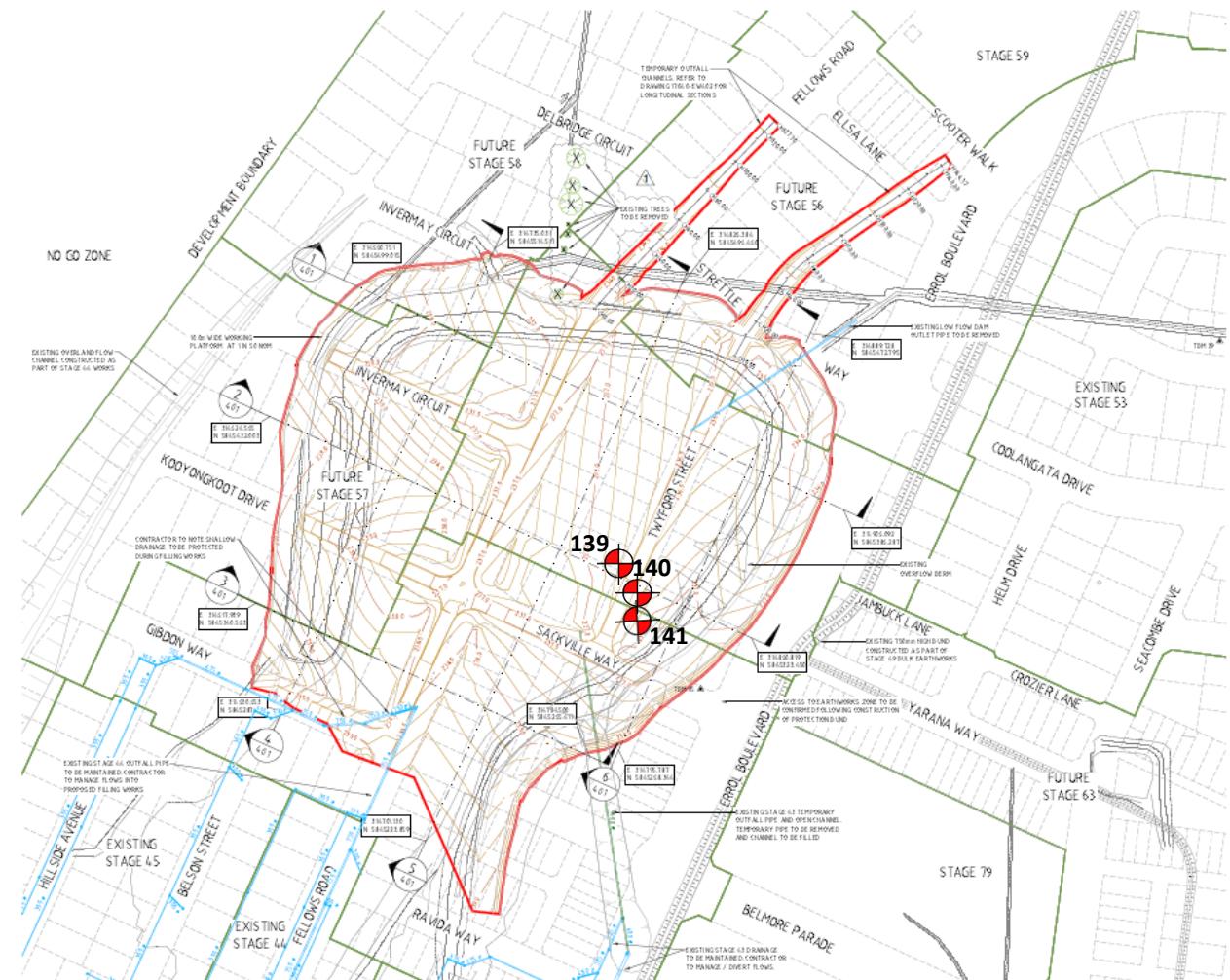
### AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	47
<b>Location:</b>	Mickleham				
Sample No	139	140	141		
Date Tested	5/09/2023	5/09/2023	5/09/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	6	6	6		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.92	1.93	2.01	
Field Moisture Content	%	21.5	24.8	23.8	
Material:	Imported Clay Fill	Imported Clay Fill	Imported Clay Fill		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.00	2.00	2.07	
Optimum Moisture Content	%	22.5	23	24	
<b>Moisture Ratio</b>	%	95.5	108	99	
<b>Moisture Variation from OMC</b>	%	-1.0	2.0	-0.5	
<b>Density Ratio</b>	%	Drier	Wetter	Drier	
		96.0	96.5	97.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI47)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	8/09/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



Test Location



**NOTES:**

- FOR THE IN-FADE / FOLD-OFF INFORMATION REFER TO VERTIS CONTROL FOR THE REQUIRED TEMPORARY PLAN, TA 2022.
- CONTACT TA TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINAGE AND PITS WITHIN LIMIT OF WORKS.
- ALL WORKS TO BE CONDUCTED IN ACCORDANCE WITH LEVELS TAKEN BY SURVEYOR PRIOR TO PLACEMENT OF FILL, FILL TO BE LEVEL. TA TO PROVIDE GEOTECHNICAL ADVICE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

		J.BARCELO
1	TREES TO BE REMOVED	LAPAP 0105.23 APPROVED
2	CONSTRUCTION ISSUE	LAPAP 0404.23 APPROVED
REV DESCRIPTION		APPROVED DATE G.ROMANZ

H1 1000 0 10 20 40 60 80

A1

**merrifield**  
**MAB GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Merrifield, VIC 3552 East Melbourne  
TEL: 03 8573 4500 | verveprojects.com  
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HUME CITY COUNCIL  
MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM  
**CONSTRUCTION**  
366 F1 | 17040-54 | EW201 | 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
05/09/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (SI47)

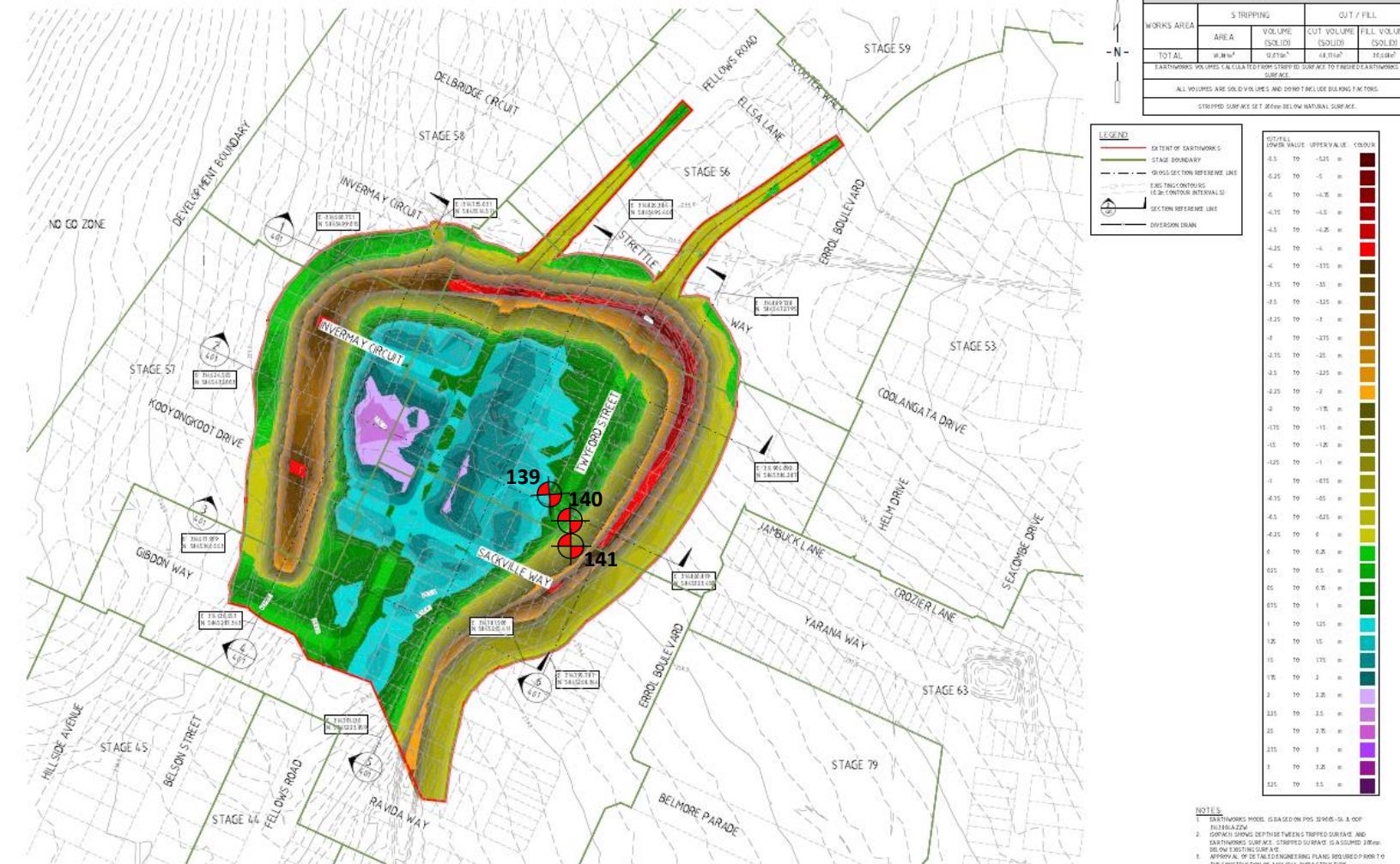
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL		STAGE							
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM			BULK EARTHWORKS ISOPACH PLAN						
<b>CONSTRUCTION</b>		PROJECT REF.	366 F1	PROJECT NO.	17040-54	WORKS ID	EW301	VERSION	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**  
05/09/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S147)**

SITE PLAN SKETCH=NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

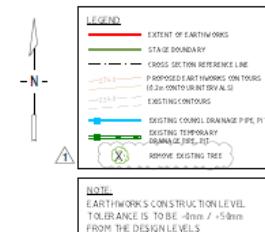
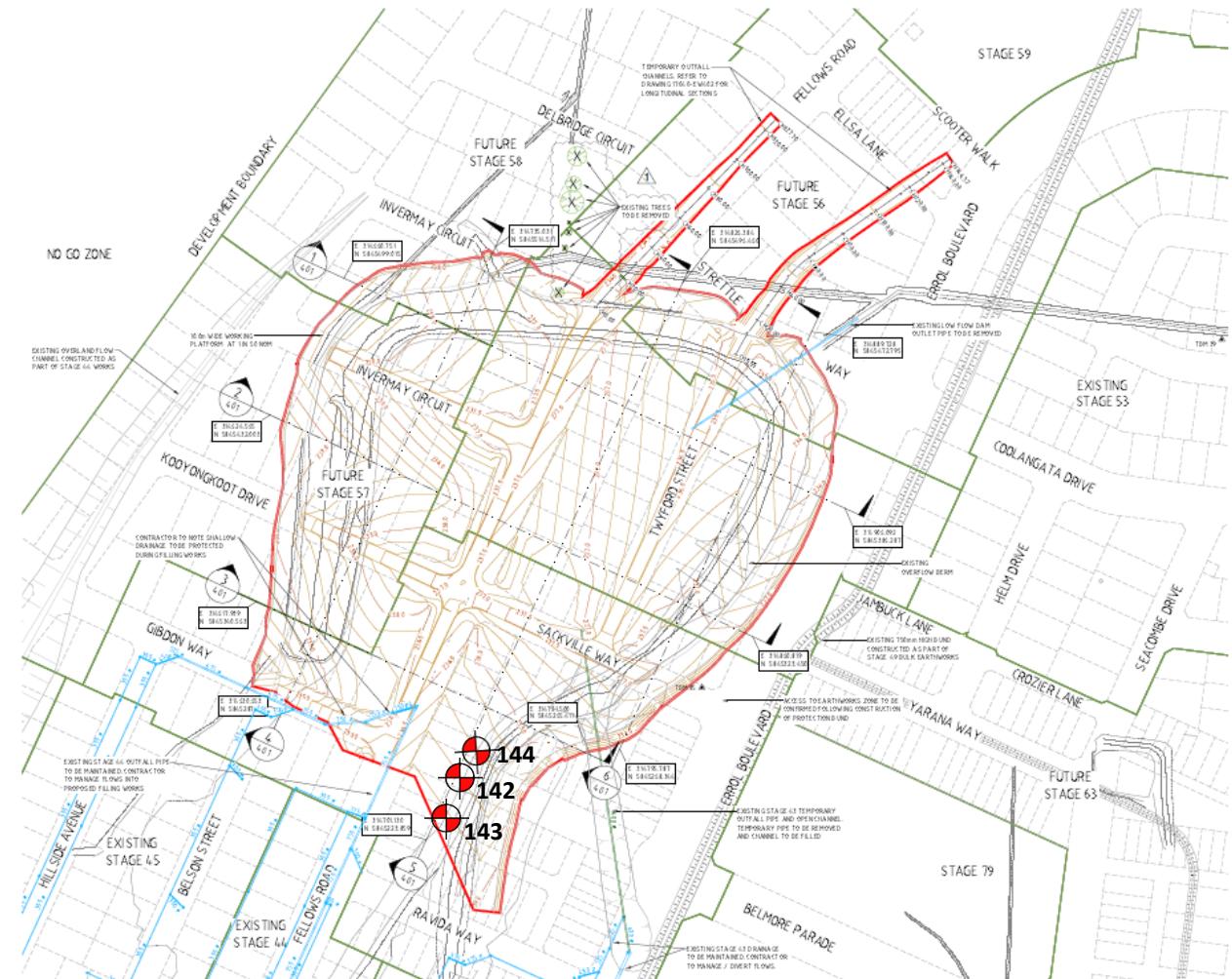
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	48
<b>Location:</b>	Mickleham				
Sample No	142	143	144		
Date Tested	6/09/2023	6/09/2023	6/09/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	4	4	4		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.99	1.95	2.00	
Field Moisture Content	%	22.9	23.0	22.8	
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.07	2.02	2.06	
Optimum Moisture Content	%	23.5	23.5	23	
<b>Moisture Ratio</b>	%	97.5	98	99	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		96.0	96.5	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI48)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
	NATA Accredited Laboratory No. 20172 Accreditation for compliance with ISO/IEC 17025 - Testing			<b>Date:</b>	David Burns 8/09/2023



Test Location



- NOTES:**
- FOR THE RELEVANT CONTRACTOR REFER TO VERTIS CONTROL FOR THE REQUIRED TEMPORAL PLAN, TA 2022.
  - CONTACT VERTIS TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINAGE AND PITS WITHIN LIMIT OF WORKS.
  - ALL WORKS ARE TO BE CONDUCTED IN ACCORDANCE AND LEVELS TAKEN BY SURVEYOR PRIOR TO PLACEMENT OF FILL. FILL TO BE LEVEL. TAKE GEOTECHNICAL ADVICE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

		J.BARCELO	
1	TREES TO BE REMOVED	LAPAP	01/05/23
2	CONSTRUCTION ISSUE	LAPAP	24/04/23
REV DESCRIPTION	APPROVED DATE	G.GROMANZ	

H1 1000 0 10 20 40 60 80

A1

**merrifield**  
**MAB GPC**

**verve**  
 Ground Floor, 207-213 Waverley Road,  
 Southbank East Melbourne VIC 3006  
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HUME CITY COUNCIL  
**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**  
**BULK EARTHWORKS LAYOUT PLAN**  
**CONSTRUCTION**  
 366 F1 | 17040-54 | EW201 | 1

**PROJECT:**  
 Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
 BMD Urban

**DATE:**  
 06/09/2023

**LOCATION:**  
 Mickleham

**PROJECT No:**  
 1120 0428-1 (SI48)

SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
 GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				REVISOR	
				J BARCELO	
				REVISOR	
				LAPAP	
2 CONSTRUCTION ISSUE	LLAPAP	EMAIL.DT	MMBREVISOR	G.ROMANZC	
REV DESCRIPTION	APPROVED	DATE			



HUME CITY COUNCIL	
AC3	EW301
MERRIFIELD LIVING - SECTION D	BULK EARTHWORKS
STAGE 54	ISOPACH PLAN
MICKLEHAM	
<b>CONSTRUCTION</b>	366 F1
	17040-54
	EW301
	0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (S148)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

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GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

## AS1289.5.7.1

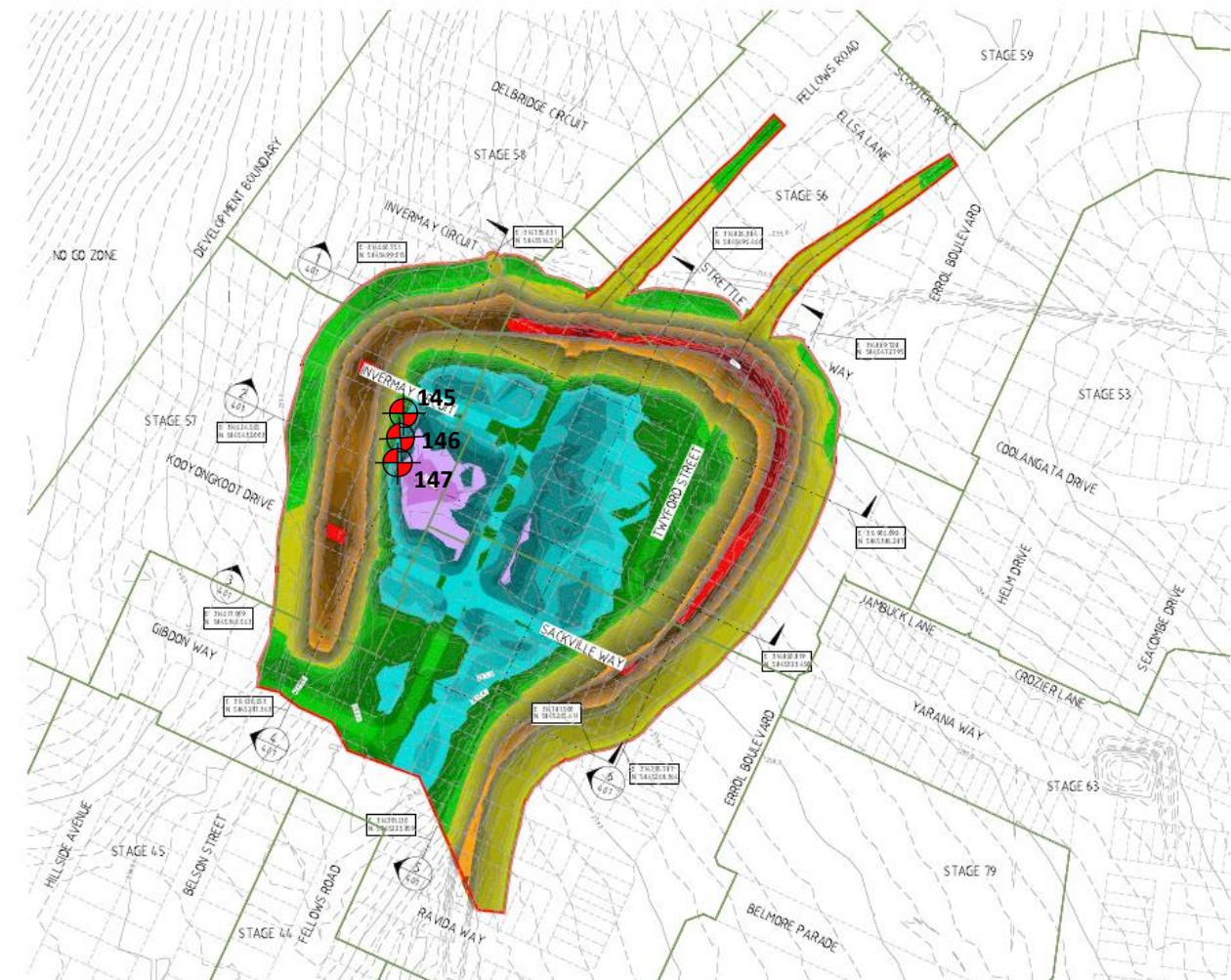
A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	49
<b>Location:</b>	Mickleham				
Sample No	145	146	147		
Date Tested	07/09/2023	07/09/2023	07/09/2023		
Time Tested	AM	AM	AM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		13	13	13	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.98	1.97	1.99	
Field Moisture Content	%	21.5	22.4	22.0	
Material:		Imported Clay Fill	Imported Clay Fill	Imported Clay Fill	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.05	2.05	2.06	
Optimum Moisture Content	%	22	22.5	22.5	
<b>Moisture Ratio</b>	%	98	99.5	97.5	
<b>Moisture Variation from OMC</b>	%	-0.5	0.0	-0.5	
<b>Density Ratio</b>	%	Drier	OMC	Drier	
		96.0	96.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI49)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
 David Burns Date: 12/09/2023					





Test Location



WORKS AREA	VOLUMES		CUT / FILL
	STRIPPING	CUT VOLUME (SOLID)	
TOTAL	10,116m³	14,116m³	15,116m³
EARTHWORKS VOLUMES CALCULATED FROM STRIPPED SURFACE TO FINISHED EARTHWORKS SURFACE			
ALL VOLUMES ARE SOLID VOLUMES AND DO NOT INCLUDE BULKING FACTORS			
STRIPPED SURFACE SET 300mm BELOW NATURAL SURFACE			

LEGEND

- EXTENT OF EARTHWORKS
- STAGE BOUNDARY
- GROSS SECTION REFERENCE LINE
- EXISTING CONTOURS (10cm CONTOUR INTERVALS)
- SECTION REFERENCE LINE
- DIVISION DRAIN

LOWER VALUE	UPPER VALUE	COLOUR
-4.5	-5.5	
-4.25	-5	
-4	-4.5	
-4.25	-4.5	
-4.5	-4.25	
-4.25	-4	
-4	-3.75	
-3.75	-3.5	
-3.5	-3.25	
-3.25	-3	
-3	-2.75	
-2.75	-2.5	
-2.5	-2.25	
-2.25	-2	
-2	-1.75	
-1.75	-1.5	
-1.5	-1.25	
-1.25	-1	
-1	-0.75	
-0.75	-0.5	
-0.5	-0.25	
-0.25	0	
0	0.25	
0.25	0.5	
0.5	0.75	
0.75	1	
1	1.25	
1.25	1.5	
1.5	1.75	
1.75	2	
2	2.25	
2.25	2.5	
2.5	2.75	
2.75	3	
3	3.25	
3.25	3.5	

NOTES:

- EARTHWORKS MODEL IS BASED ON POS 10000-50 & 00P-10000-50ZM
- DEPTH IS THE DEPTH BETWEEN TRIPPED SURFACE AND EXISTING SURFACE. STRIPPED SURFACE IS ASSUMED 300mm BELOW EXISTING SURFACE
- APPROVAL OF THE ENGINEERING PLANS REQUIRED BEFORE THE CONSTRUCTION OF ANY CIVIL INFRASTRUCTURE

CONSTRUCTION ISSUE	LAPAP	MARSHAL	BAROLO	BAROLO	BAROLO	BAROLO
REV	CONSTRUCTION ISSUE	LAPAP	10/01/21	APPROVED	G.ROMANZ	
DESCRIPTION						
APPROVED						
DATE						



HUME CITY COUNCIL  
PROJECT: MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM  
CONSTRUCTION  
REF ID: 366 F1  
REF ID: 17040-54  
REF ID: EW301  
REF ID: 0

PROJECT: Merrifield Estate – Section D – Stage 54 (Level 1)	CLIENT: BMD Urban	DATE: 07/09/2023	SITE PLAN SKETCH—NOT TO SCALE
LOCATION: Mickleham	PROJECT No: 1120 0428-1 (SI49)		



A&Y ASSOCIATES  
GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

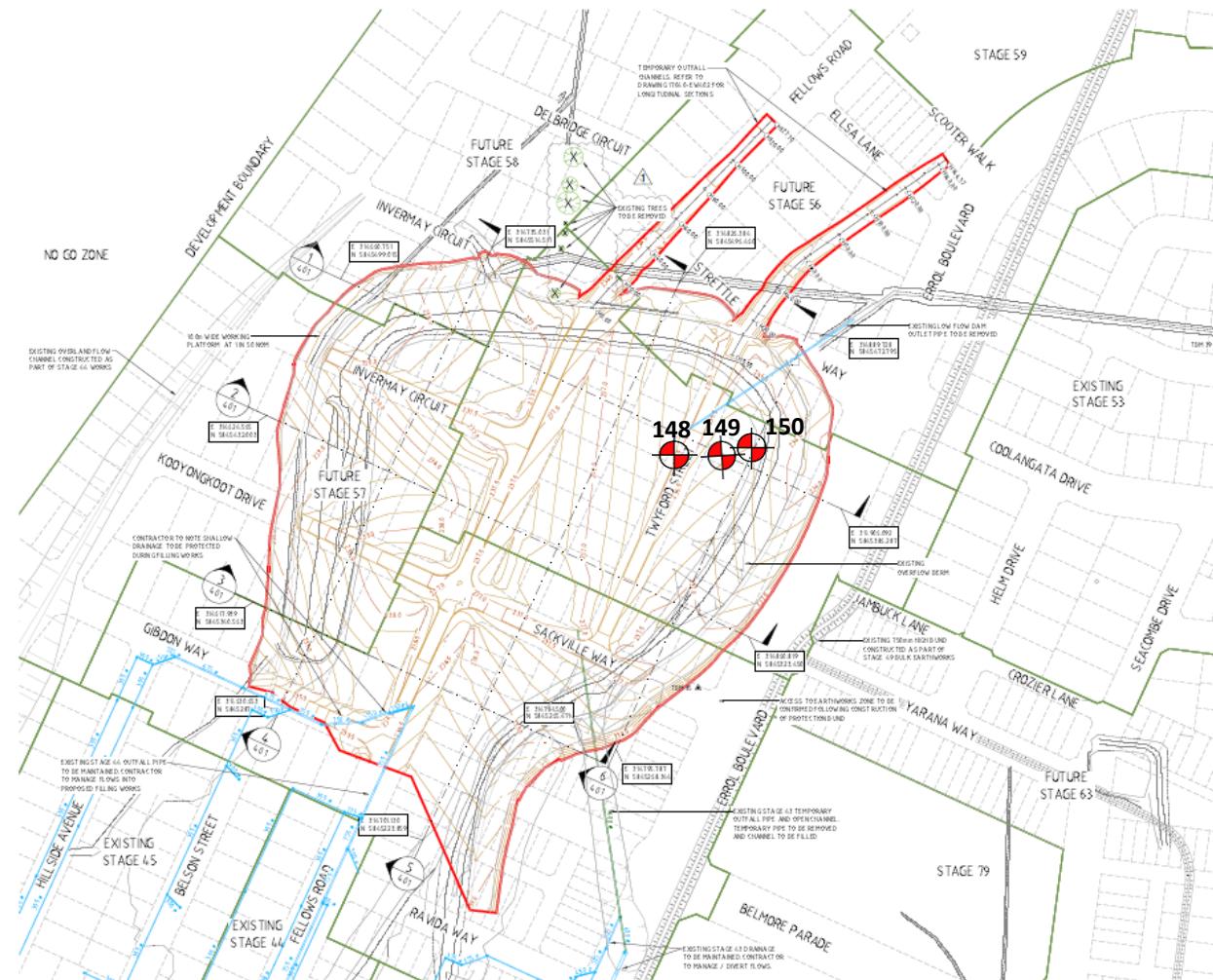
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	50
<b>Location:</b>	Mickleham				
Sample No	148	149	150		
Date Tested	11/09/2023	11/09/2023	11/09/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	4	4	5		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	1.98	2.04	1.95	
Field Moisture Content	%	22.8	21.3	23.7	
Material:	Imported Clay Fill	Imported Clay Fill	Imported Clay Fill		
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.06	2.10	2.04	
Optimum Moisture Content	%	23	22	24	
<b>Moisture Ratio</b>	%	99	97	98.5	
<b>Moisture Variation from OMC</b>	%	0.0	-0.5	-0.5	
<b>Density Ratio</b>	%	OMC	Drier	Drier	
		96.5	97.0	96.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI50)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Date:</b>	12/09/2023
 <div style="display: flex; justify-content: space-between; align-items: center;"> <span>NATA Accredited Laboratory No. 20172</span> <span>Approved Signatory:</span>  </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Accreditation for compliance with ISO/IEC 17025 - Testing</span> <span>David Burns</span> </div>					



Test Location



		J.BARCELLO
	APPROVED	H1-1000 0 10 20 30 40 50 60 70
1 TREES TO BE REMOVED	LAPAP	E100.23
2 CONSTRUCTION ISSUE	LAPAP	E100.23
REV DESCRIPTION	APPROVED DATE	G.GROMANCZ



**verve**  
Ground Floor, 207-213 Wattleye Road,  
Mickleham VIC 3340  
TEL: 03 8373 1300 verveprojects.com  
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HUME CITY COUNCIL  
**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**  
**CONSTRUCTION** 366 F1 PROJECT NO 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
11/09/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S150)

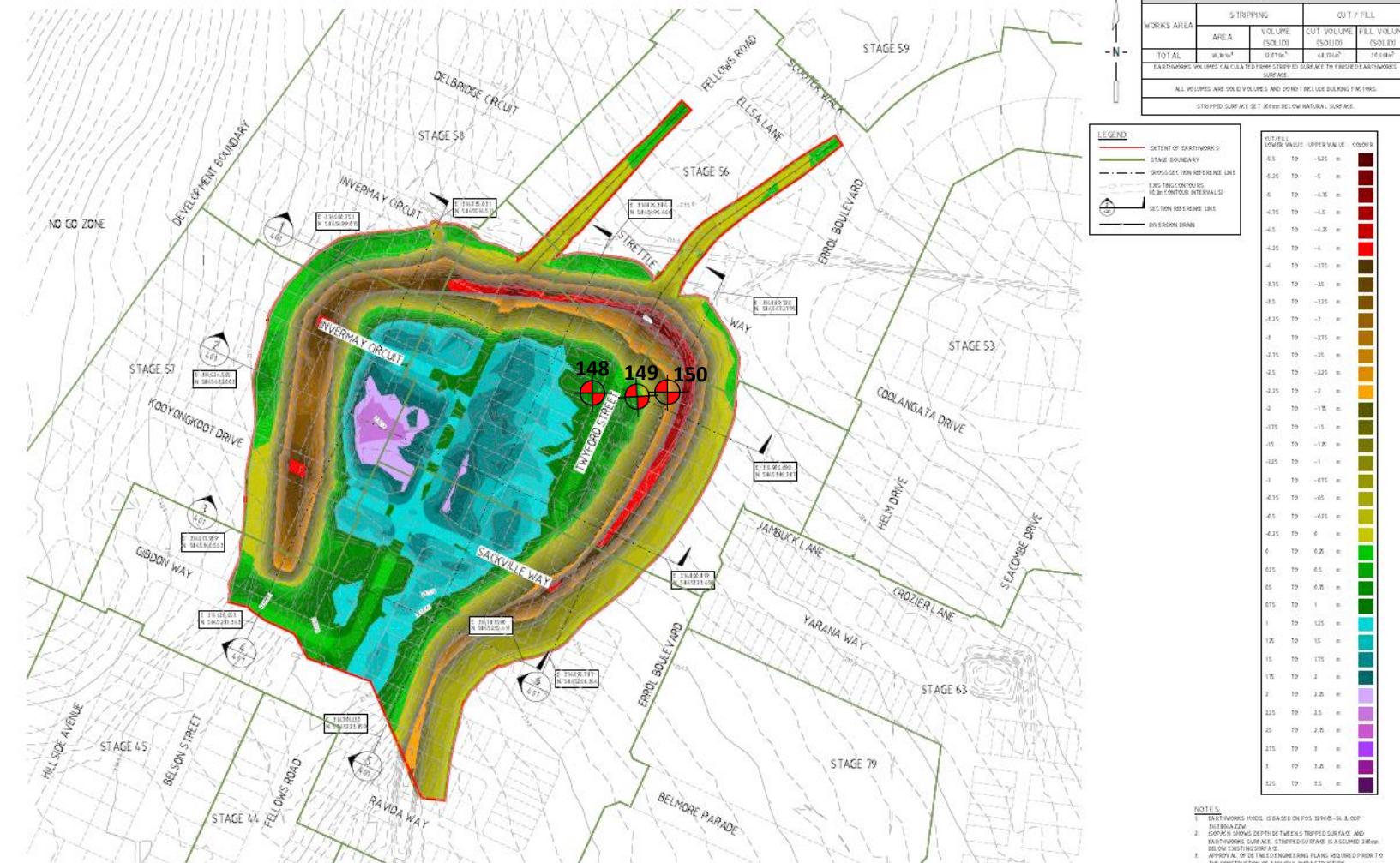
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
BULK EARTHWORKS ISOPACH PLAN	
<b>CONSTRUCTION</b>	REF ID: 366 F1
REF ID: 17040-54	REF ID: EW301
REF ID: 0	REF ID: 0

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1130 0438 1 (SIEO)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

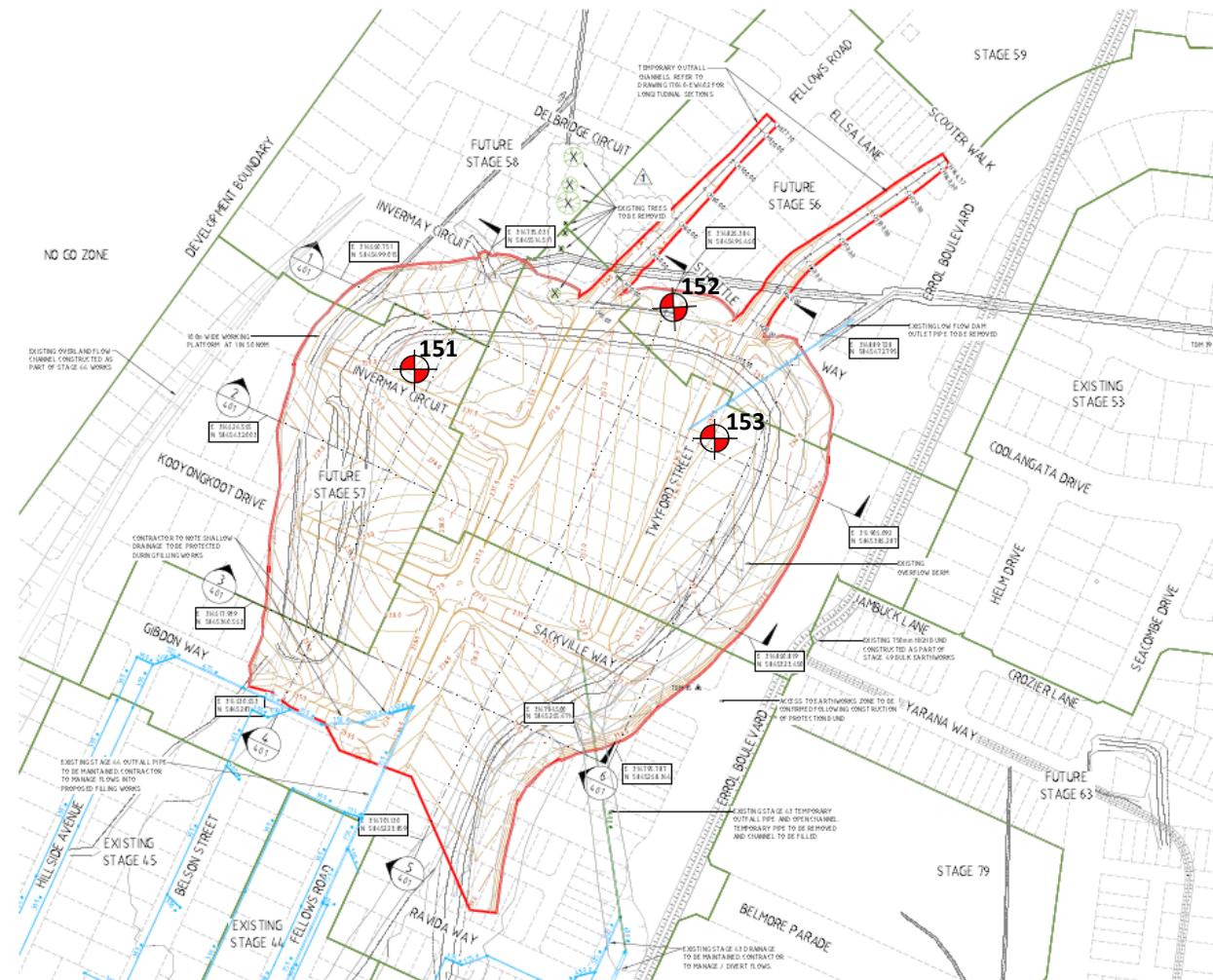
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	51
<b>Location:</b>	Mickleham				
Sample No	151	152	153		
Date Tested	21/09/2023	21/09/2023	21/09/2023		
Time Tested	AM	AM	AM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	FSL	FSL	FSL		
Layer Thickness	mm	200	200		
Test Depth	mm	175	175		
Field Wet Density	t/m <sup>3</sup>	2.00	1.97		
Field Moisture Content	%	22.8	21.3		
Material:	Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay		
Oversize Material	WET, %	0.0	0.0		
Sieve Size	mm	19	19		
Peak Converted Wet Density	t/m <sup>3</sup>	2.07	2.05		
Optimum Moisture Content	%	23	22		
<b>Moisture Ratio</b>	%	99	97	100	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	0.0	
<b>Density Ratio</b>	%	Drier	Drier	OMC	
		97.0	96.0	96.5	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI51)				
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
 <small>NATA ACCREDITED LABORATORY NO. 20172</small> <small>ACCREDITATION FOR COMPLIANCE WITH ISO/IEC 17025 - TESTING</small>					
<small>Approved Signatory:</small>  David Burns <small>Date:</small> 25/09/2023					



Test Location



		J.BARCELLO
	APPROVED	H1-1000 0 10 20 30 40 50 60 70
1 TREES TO BE REMOVED	LAPAP	E100.23
2 CONSTRUCTION ISSUE	LAPAP	E100.23
REV DESCRIPTION	APPROVED DATE	G.GROMANCZ

**merrifield**  
**MAB** **GPC**

**verve**  
Ground Floor, 207-213 Wattleye Road,  
Mickleham VIC 3340  
TEL: 03 8373 1300 verveprojects.com  
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HUME CITY COUNCIL  
**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**  
**CONSTRUCTION** 366 F1 PROJECT NO 17040-54 EW201 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
21/09/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S151)

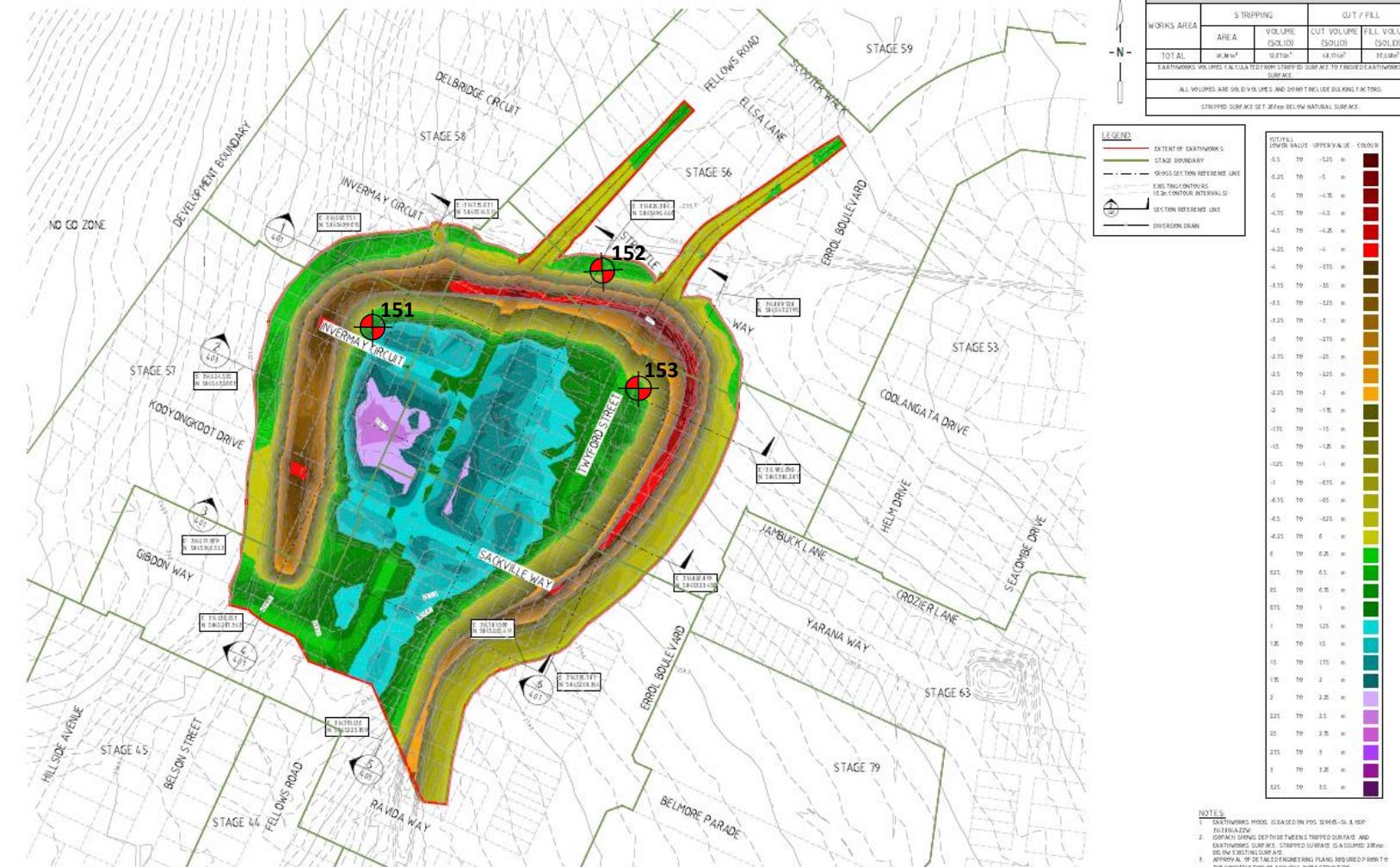
SITE PLAN SKETCH—NOT TO SCALE



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL	
AC3	EW3
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	BULK EARTHWORKS ISOPACH PLAN
<b>CONSTRUCTION</b>	366 F1 17040-54 EW301 0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
21/09/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SIE1)**

SITE PLAN SKETCH=NOT TO SCALE



# **A&Y ASSOCIATES**

# Field Density Test Results

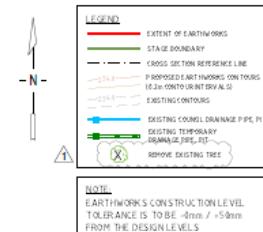
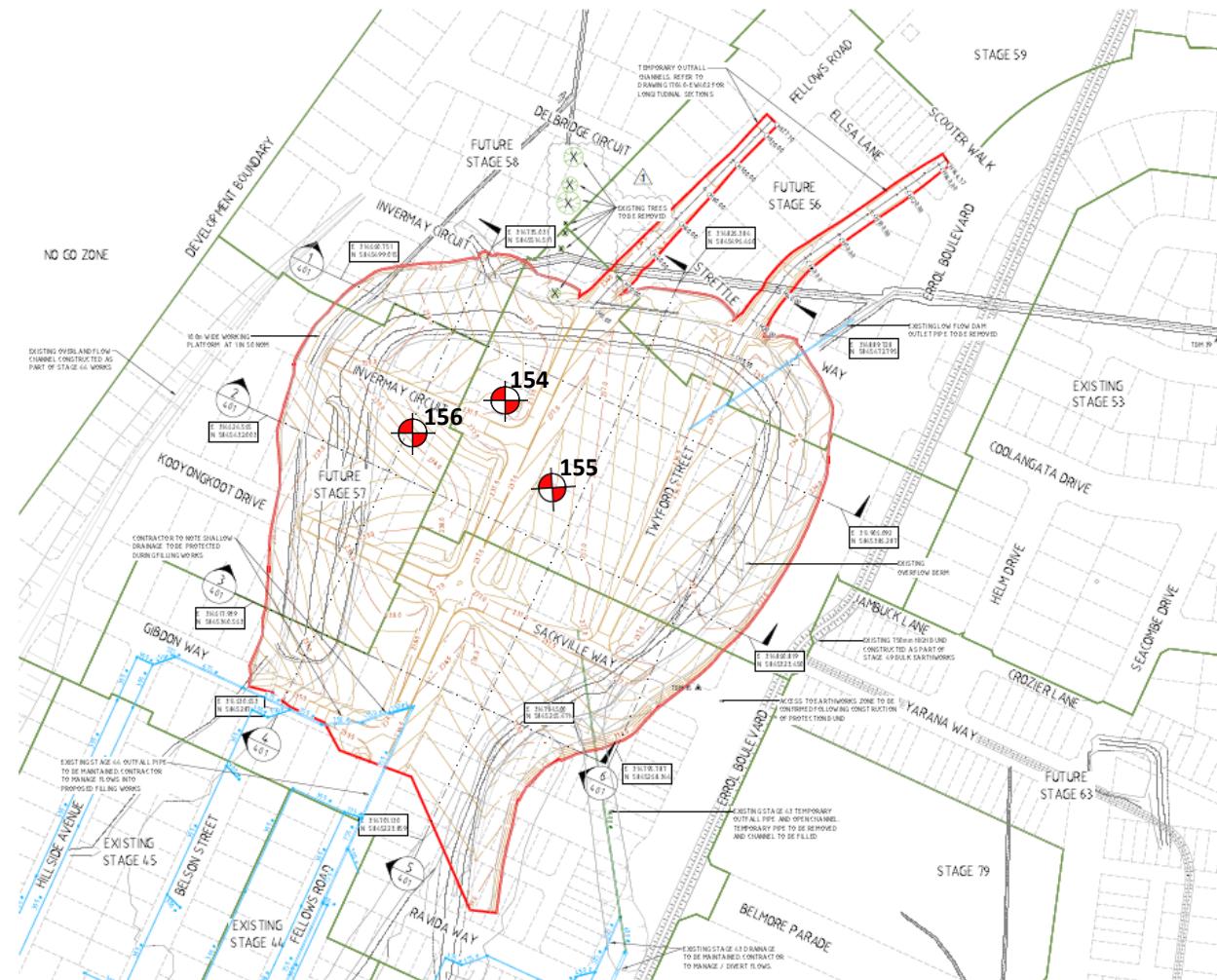
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	52
<b>Location:</b>	Mickleham				
Sample No	154	155	156		
Date Tested	22/09/2023	22/09/2023	22/09/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		FSL	FSL	FSL	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.93	1.95	1.94	
Field Moisture Content	%	21.0	21.7	21.5	
Material:		Site Derived Silty Clay	Site Derived Silty Clay	Site Derived Silty Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.01	2.03	2.03	
Optimum Moisture Content	%	21.5	22	22	
<b>Moisture Ratio</b>	%	97.5	98.5	97.5	
<b>Moisture Variation from OMC</b>	%	-0.5	-0.5	-0.5	
<b>Density Ratio</b>	%	Drier	Drier	Drier	
		95.5	96.0	96.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI52)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
 David Burns Date: 25/09/2023					



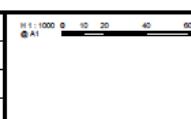
## Test Location



**NOTES:**

1. FOR THIS SET OUT J CONTROL INFORMATION REFER TO VERSUS CONTROL PLAN MBSFIELD TM HMG TMR PLAN\_1st rev 2022
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINSAGE AND FITTINGS WITHIN LIMIT OF WORKS.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEEN BY SURVEY FOR FREEZING TO PLACEMENT OF FILL. FILL TO BE LEVELLED AS PER GEOTECHNICAL ADVISE AND SUPERINTENDENTS INSTRUCTION. REPORT TO BE PROVIDED.

			<b>J.BARCEL</b>
			<b>J.BARCEL</b>
			<b>JAPAP</b>
			<b>APPROVED</b>
1.	TREES TO BE REMOVED	J.A.PAP	01/01/21
6.	CONSTRUCTION ISSUE	J.A.PAP	01/01/21
7.	OTHER	J.A.PAP	01/01/21



HOME CITY COIN

<b>ERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM</b>	<b>BULK EARTHWORKS LAYOUT PLAN</b>
<b>CONSTRUCTION</b>	<b>366 F1</b>

**PROJECT:**

**CLIENT:**  
**BMD Urban**

**DATE:**  
**22/09/2023**

**LOCATION:**

**PROJECT No:**

SITE PLAN SKETCH—NOT TO SCALE

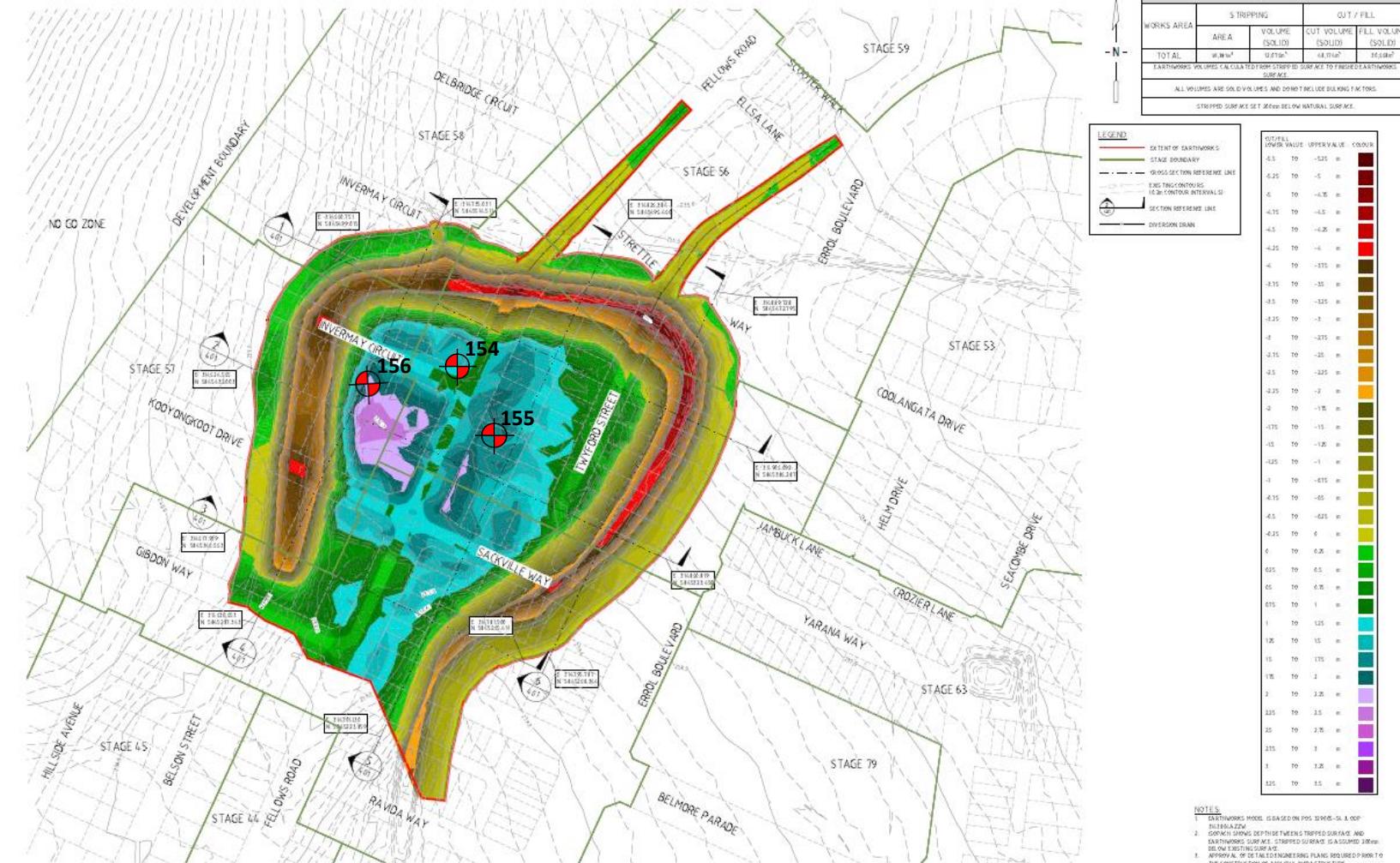


# **A&Y ASSOCIATES**

GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HOME CITY COUNCIL

MERRIFIELD LIVING - SECTION D  
STAGE 54  
MICKLEHAM

**BULK EARTHWORKS  
ISOPACH PLAN**

**PROJECT:**

**CLIENT:**  
BMD Urban

**DATE:**

**LOCATION:**

**PROJECT No:**  
**1130 0438 1 (SIE2)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

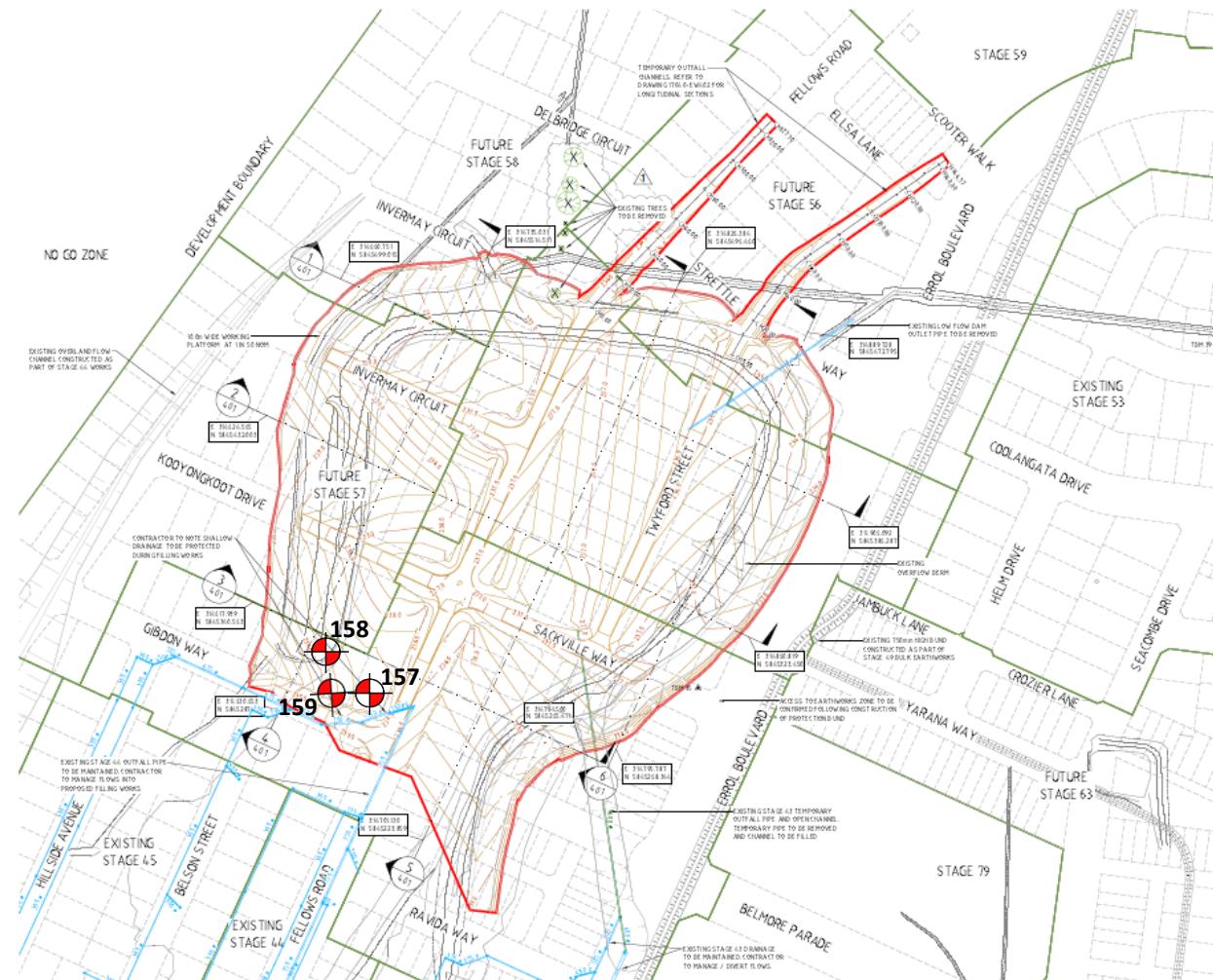
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	53
<b>Location:</b>	Mickleham				
Sample No	157	158	159		
Date Tested	25/09/2023	25/09/2023	25/09/2023		
Time Tested	PM	PM	PM		
Test Location	Refer to Plan	Refer to Plan	Refer to Plan		
Level/Layer	3/FSL	3/FSL	7/FSL		
Layer Thickness	mm 200	mm 200	mm 200		
Test Depth	mm 175	mm 175	mm 175		
Field Wet Density	t/m³ 1.86	t/m³ 1.88	t/m³ 1.90		
Field Moisture Content	% 20.2	% 18.7	% 18.3		
Material:	Imported Clay	Imported Clay	Imported 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/m³ 1.94	t/m³ 1.94	t/m³ 1.97		
Optimum Moisture Content	% 18.5	% 17	% 19		
<b>Moisture Ratio</b>	% 109	% 110	% 96.5		
<b>Moisture Variation from OMC</b>	% 1.5	% 2.0	-0.5		
<b>Density Ratio</b>	% Wetter	% Wetter	% Drier		
	96.0	97.0	97.0		
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI53)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
	<b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>			<b>Date:</b>	David Burns 27/09/2023
	<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>				



Test Location



		J.BARCELLO
1 TREES TO BE REMOVED	LAPAP	E10.21
2 CONSTRUCTION ISSUE	LAPAP	E10.21
REV DESCRIPTION	APPROVED DATE	G.GROMANZ

**merrifield**  
**MAB** **GPC**

**verve**  
Ground Floor, 207-213 Waverley Road,  
Mickleham VIC 3340  
TEL: 03 8373 1300 verveprojects.com  
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HUME CITY COUNCIL

**MERRIFIELD LIVING - SECTION D**  
**STAGE 54**  
**MICKLEHAM**

**CONSTRUCTION****BULK EARTHWORKS  
LAYOUT PLAN**

366 F1 | 17040-54 | EW201 | 1

**PROJECT:**  
Merrifield Estate – Section D – Stage 54 (Level 1)

**CLIENT:**  
BMD Urban

**DATE:**  
25/09/2023

**LOCATION:**  
Mickleham

**PROJECT No:**  
1120 0428-1 (S153)

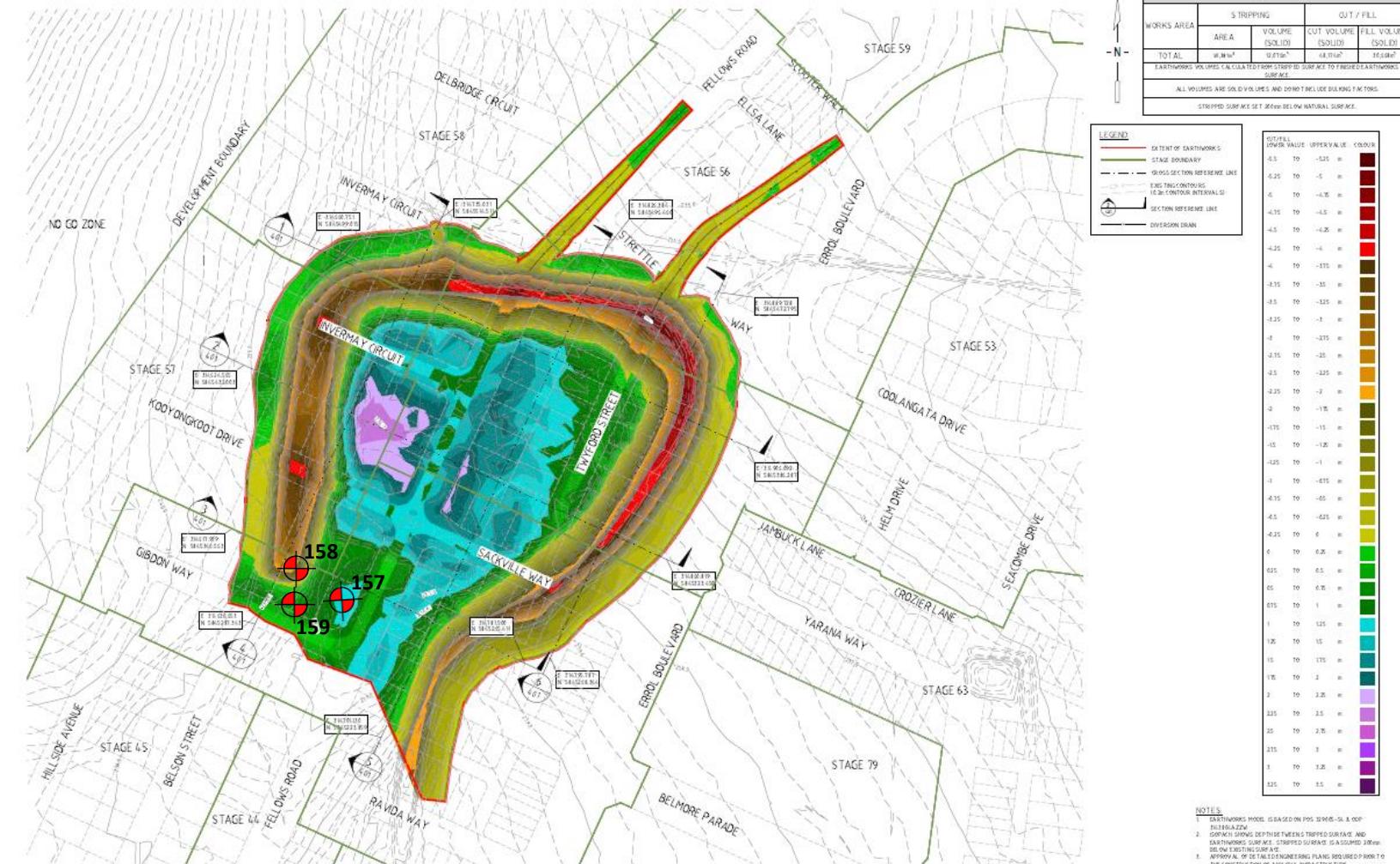
**SITE PLAN SKETCH—NOT TO SCALE**



**A&Y ASSOCIATES**  
GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



				J BARCELO	
				J BARCELO	
				LAPAP	
E	CONSTRUCTION ISSUE	J.LAPAP	3/11/13	APPROVED	
REV	DESCRIPTION	APPROVED	DATE	G.ROMANZ	



HUME CITY COUNCIL		PERMIT NO.		
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM		BULK EARTHWORKS ISOPACH PLAN		
<b>CONSTRUCTION</b>	366 F1	17040-54	EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:  
25/09/2023

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SIE3)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS

# Field Density Test Results

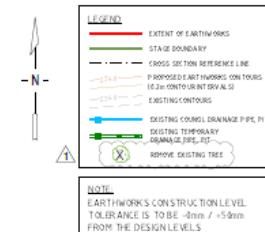
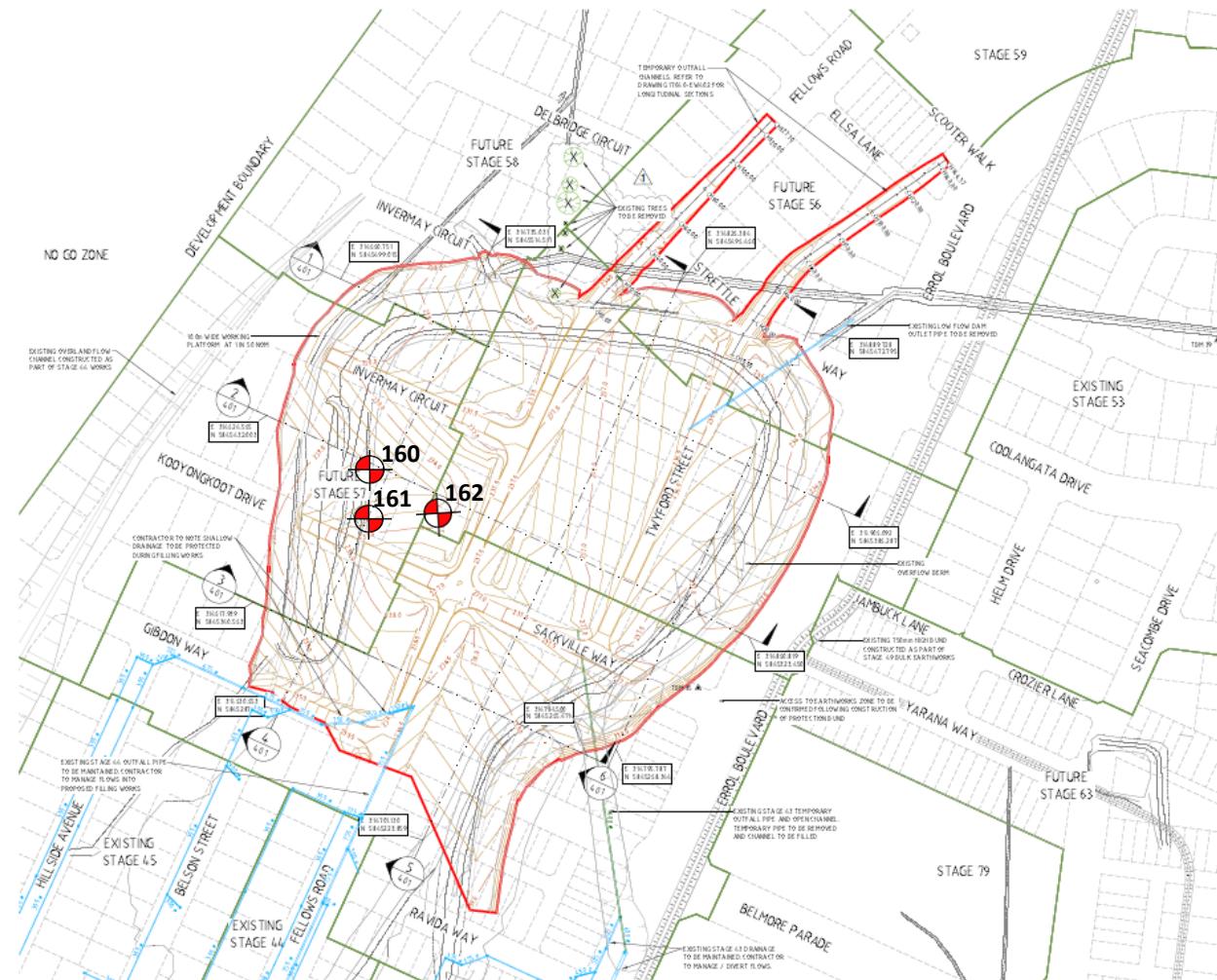
## AS1289.5.7.1

A & Y Associates Pty Ltd  
 5/16 Network Drive  
 Truganina VIC 3029  
 PH: 0400 413 531  
[info@ayassociates.com.au](mailto:info@ayassociates.com.au)

<b>Client:</b>	BMD Urban			<b>Job No:</b>	BMD2923
<b>Project:</b>	Merrifield Living - Section D - Stage 54 (Level 1)			<b>Report:</b>	54
<b>Location:</b>	Mickleham				
Sample No	160	161	162		
Date Tested	26/09/2023	26/09/2023	26/09/2023		
Time Tested	PM	PM	PM		
Test Location		Refer to Plan	Refer to Plan	Refer to Plan	
Level/Layer		7/FSL	6/FSL	10/FSL	
Layer Thickness	mm	200	200	200	
Test Depth	mm	175	175	175	
Field Wet Density	t/m <sup>3</sup>	1.94	1.82	1.87	
Field Moisture Content	%	21.3	24.8	23.3	
Material:		Imported Clay	Imported Clay	Imported Clay	
Oversize Material	WET, %	0.0	0.0	0.0	
Sieve Size	mm	19	19	19	
Peak Converted Wet Density	t/m <sup>3</sup>	2.02	1.88	1.93	
Optimum Moisture Content	%	22	23	21.5	
<b>Moisture Ratio</b>	%	97	108	108.5	
<b>Moisture Variation from OMC</b>	%	-1.0	2.0	1.5	
<b>Density Ratio</b>	%	Drier	Wetter	Wetter	
		96.0	97.0	97.0	
<b>Specification:</b>	95% STD			<b>Test Selection:</b>	N/A
<b>Notes:</b>	Ref: 1120 0428-1 (SI54)			<b>Sampling Method:</b>	AS 1289 1.2.1 6.4(b)
<b>Test Method</b>	AS1289 5.8.1, 5.7.1, 2.1.1, 1.1			<b>Approved Signatory:</b>	
 <b>NATA</b> <small>WORLD RECOGNISED ACCREDITATION</small>					
<small>NATA Accredited Laboratory No. 20172</small> <small>Accreditation for compliance with ISO/IEC 17025 - Testing</small>					
<small>Approved Signatory:</small>  David Burns Date: 27/09/2023					



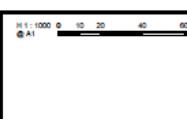
## Test Location



**NOTES:**

1. FOR THIS SET OUT J CONTROL INFORMATION REFER TO VERSUS CONTROL PLAN MBSR FIELD TO H MAG TIR PLAN...Jan 2022
2. CONTRACTOR TO PROTECT ALL EXISTING INFRASTRUCTURE INCLUDING DRAINS AND FITTINGS WITHIN LIMIT OF WORKS.
3. ALL UNSUITABLE MATERIAL TO BE REMOVED AND LEVELS TAKEN BY SURVEY FOR PAYMENT TO PAYMENT POINT FILL TO LEVEL TIRSPR GEOTECHNICAL ADVISE AND SUPERINTENDENTS INSTRUCTION REPORT TO BE PROVIDED.

			<b>J.BARCEL</b>
			<b>J.BARCEL</b>
			<b>JAPAP</b>
			<b>APPROVED</b>
1.	TREES TO BE REMOVED	J.A.PAP	01/01/21
6.	CONSTRUCTION ISSUE	J.A.PAP	01/01/21
7.	OTHER	J.A.PAP	01/01/21



HIME CITY COLIN

<b>ERRIFIELD LIVING - SECTION D</b>	<b>BULK EARTHWORKS</b>
STAGE 54	LAYOUT PLAN
MICKLEHAM	
<b>CONSTRUCTION</b>	
366 F1	17040-54
	EW201
	1

**PROJECT:**

**CLIENT:**  
**BMD Urban**

**DATE:**  
26/09/2023

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**LOCATION:**

**PROJECT No:**  
**1120 0428-1 (S154)**

SITE PLAN SKETCH—NOT TO SCALE



# A&Y ASSOCIATES

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GEOTECHNICAL ENGINEERING CONSULTANTS



## Test Location



			J.BARCELO	H 1:1000 A1
			J.BARCELO	
			LAPAP	
E	CONSTRUCTION ISSUE	LAPAP	APPROVED	G.ROMANZ
REV	DESCRIPTION	APPROVED	DATE	



HUME CITY COUNCIL	
MERRIFIELD LIVING - SECTION D STAGE 54 MICKLEHAM	
<b>CONSTRUCTION</b>	BULK EARTHWORKS ISOPACH PLAN
366 F1	17040-54
EW301	0

**PROJECT:**

**CLIENT:**  
BMD Urban

DATE:

**LOCATION:**

**PROJECT No:**  
**1120 0428 1 (SIE4)**

SITE PLAN SKETCH=NOT TO SCALE



# A&Y ASSOCIATES

GEOTECHNICAL ENGINEERING CONSULTANTS