Newhaven Estate - Stage 18, Tarneit

Level 1 Inspection & Testing Report

Reference: 1120 0394-1



Prepared for:

BMD Urban

March 2023



Document Control Record

Prepared by:

A&Y Associates Pty Ltd

ABN 92 614 244 665

5/16 Network Drive

Truganina, VIC 3029

T: (03) 8754 8325

E: info@ayassociates.com.au

W: www.ayassociates.com.au

Document control								
Report title		Level 1 Inspection & Testing						
Project refe number	rence	1120 0394-1	1120 0394-1					
Client		BMD Urban						
Contact na	me	Devvrath Nautiyal						
Contact nu	mber	0408 769 300						
Contact e-	mail	devvrath.nautiyal@bmd.com.au						
Revision	Date	Descriptions/Status	Author	Reviewer	Approver			
0	10/03/2023	First Issue	Y Zheng	A Tan	A Tan			

Approver

Alvin Tan

(BE Civil and Infrastructure), MIEAust

Senior Geotechnical Engineer

E: alvin@ayassociates.com.au | M: 0449 288 338



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.

This report has been prepared exclusively for use by our client. This report cannot be reproduced without the written authorisation of A&Y and then can only be reproduced in its entirety.

Applicability

This report has been prepared for the benefit for our client with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

No responsibility for this report will be taken by A&Y if it is altered in any way, or not reproduced in full.

Contents

1	Introduction	3
2	Project Summary	3
3	Project Specifications	4
4	Subgrade Assessment	5
5	Earthworks	5
6	Fill Material	5
7	Testing	6
8	Finished Surface Levels	6
9	Exclusion	6
10	Conclusion	7
Аp	pendix A - Site Plan	8
Аp	pendix B — Test Locations	. 10
Ар	pendix C – Test Results Summary	. 12
Δn	pendix D – NATA Test Results	14

1 Introduction

This report presents the results of the Level 1 Inspection and Testing for the construction of the fill platforms located in Newhaven Estate – Stage 18, Tarneit.

2 Project Summary

It is understood that BMD Urban require the fill platforms within Stage 18 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 5 working days from 17th August 2022 to 22nd August 2022.

This report is applicable for fill placed by BMD Urban for the following lots located in Newhaven Estate – Stage 18 as shown in Appendix A – Site Plan.

• Lot 1801 to 1841.

3 Project Specifications

No specification on the compaction and moisture requirement has been provided for the construction works in Stage 18. However, based on drawing (ref: 304671CR100-Rev0 prepared by PEET PTY LTD) all filling on lots and within road reserves greater than 200mm is to be undertaken under level 1 supervision in accordance with AS3798. The supervision and inspections were performed based on AS3798. A short summary of the requirements outline in AS3798 is provided below:

- All filling in excess of 200mm depth within the building envelope of allotments shall be undertaken to specifications satisfying the requirements of AS3798.
- Material to be used for fill construction shall satisfy the requirements of AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments". Material used shall be free of:
 - o Organic soils, such as topsoils, severely root affected subsoil and peat;
 - o Contaminated soils;
 - Materials which undergo volume change or loss of strength when disturbed and exposed to moisture;
 - o 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:
 - o 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.

4 Subgrade Assessment

The subgrade was assessed by A&Y Associates following the topsoil removal and before any fill was placed. The subgrade assessment was undertaken on the 16th of August 2022 and 18th of August 2022 as mentioned in report 1120 0394-1 (SSI1).

The exposed subgrade material comprised of 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 200mm-600mm. 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.

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 15 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 15 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

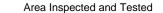
A&Y Associates was not involved in monitoring and testing the following works and as such are not included in the Level 1 report.

- 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.

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.

Appendix A - Site Plan







EXISTING FENCE REMOVED BY OTHERS

EXISTING STAGE 14

FE OF THE FORARY BODSTRIF AND HATO TO ENG THE

CONTRACTOR TO BATTER AT 120 TO 2013 THIS ALMORRAND FERENCE WHERE RECORDED

WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REFER TO BARWON WATER'S CUSTOMER GUIDE FOR WORKS ON OR NEAR BARWON WATER ASSETS' AND MAKE APPLICATIONS AS PER BARWON WATER'S REQUIREMENTS.

WARNING

BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUCED BLECTRICAL CURRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

EDITARE OF UNDERSROUND/OVERHEAD SERVICES
THE LICENTAL OF EDITORS OF LESS FOR THE TABLE TO THE ENGLISH OF THE ENGLISHMENT OF THE ENGLISHMENT



	1 / 1 /	NO SERVICE	17	NA F	1720	F 150.5
				Bide		
				H IGHT		2 3
]		
]		
0	ISSUED FOR CONSTRUCTION	M.H.	04/11/21]		
A	ISSUED FOR APPROVAL	M.H.	140921]		
Rev	Amendments	Approved	Date	1		

EXISTING STAGE 17

FUTURE STAGE 21

FEMALETE POPARY EDGELTER, TURNING AREA, ENGLAFOS AND TRAD CLOSED NEWACE AND NATION TO ENERTHG.

FUTURE STAGE 19

PROPOSED CATCH DEARS TO BE COMECTED TO ENISTING STACE IF CATCH DRAIN , RETER TO SHALL CRITIC ROP DETAIL

1815

1813

1812



EX. OPTIC FIRRE DEPTH LZON APPROX

RAPINOS MATER MARRIED POST

ORNAMENT

CONTRACTOR TO SHAPE TRANSMISSION EASE-BUT BUND TO BUNDEFT ROWS INTO PIT, BUND TO STOP BEFORE BARWON WATER EASE-BUT

EXISTING ELECTRICITY TRANSMISSION EASEMENT



EXISTING STAGE 15



NEWHAVEN ESTATE STAGE 18 ROAD AND DRAINAGE FACE PLAN WYNDHAM CITY COUNCIL PEET NO. 1895 PTY LTD

CONSTRUCTION 304671CR200

PROJECT: CLIENT: Newhaven Estate - Stage-18 (Level 1) **BMD Urban** LOCATION: PROJECT No: **Tarneit** 1120 0394-1

SITE PLAN SKETCH—NOT TO SCALE



Appendix B – Test Locations



Indicative Test Location





WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REPER TO BARWON WATER'S OUSTOMER GILLE FOR "WORKS ON OR NEAR BARWON WATER ASSETS! AND MAKE APPLICATIONS AS PER BARWON WATER'S REQUIREMENTS.

WARNING

BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUCED BLECTRICAL CURRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

WARNING

BEMARE OF UNDERSHOUND/OVERHEAD SERVICES
THE LEATHING FOR UNDERSHOUND/OVERHEAD SERVICES
THE LEATHING FOR UNDERSHOUND FOR HEAD THE BACK THOMPS SHALL BE FROM SHALL BE FROM SHALL BE FOR UNDERSHOUND FOR SHALL BE SHALL BE FOR INCOMING THE MINISTER FOR SHALL BE SHALL BE



	Ray Amendments	Approved	Date	wy use or relative by Bild party on the context of this document.	apilre.com.au	ABN 55 050
PROJECT:			CLIENT:			
Newhaven Estate – Sta	age-18 (Level 1)		BMD Urban			
LOCATION:			PROJECT No:			

1120 0394-1

Tarneit

* Authorised Data M.HOLMES 14/09/21

P.CLIFTON

NEWHAVEN ESTATE
STAGE 18
ROAD AND DRAINAGE
FROED-HAUCTY COUNCIL
PEET NO.1858 PTY LTD

CONSTRUCTION 304671CR200

A&Y ASSOCIATES
GEOTECHNICAL ENGINEERING CONSULTANTS

SITE PLAN SKETCH—NOT TO SCALE

J. KOEHLER

<u>Appendix</u>	<u>C – Test Res</u>	<u>ults Summary</u>

Project No 1120 0394-1					Client	BMD Urban					
Project Na	ame	Newhaven Est	ate - Stag	e 18		Specification	,	Density Ratio	2 95% of 1	Peak Wet Density	
Location		Tarneit				Specification	1	Delisity Ratio	J 2 33/0 UI I	eak Wet Delisity	
Test No	Retest of Test	Date	Location	Layer	Oversize	Density Ratio	Moisture Ratio	Moisture Variation	Pass / Fail	Retest	
#	#		Lot #	#	%	%	%	%		Pass / Fail	
1	-	17/08/2022	-	1	16.0	95.0	91.0	-1.5	Pass	-	
2	-	17/08/2022	-	1	15.0	96.0	93.0	-2.0	Pass	-	
3	-	17/08/2022	-	1	14.0	96.0	92.5	-1.5	Pass	-	
4	-	18/08/2022	-	2	16.9	95.5	92.0	-1.5	Pass	-	
5	-	18/08/2022	-	2	16.0	96.0	94.0	-1.0	Pass	-	
6	-	18/08/2022	-	2	16.0	95.5	94.5	-2.0	Pass	-	
7	-	19/08/2022	-	3	17.0	98.5	86.0	-2.0	Pass	-	
8	-	19/08/2022	-	3	16.1	98.5	88.5	-2.5	Pass	-	
9	-	19/08/2022	-	3	14.0	98.0	92.5	-1.5	Pass	-	
10	-	20/08/2022	-	1	13.6	98.0	85.0	-3.0	Pass	-	
11	-	20/08/2022	-	1	15.0	99.0	89.5	-1.5	Pass	-	
12	-	20/08/2022	-	1	14.8	98.5	86.5	-3.0	Pass	-	
13	-	22/08/2022	-	1	15.5	98.5	87.5	-2.5	Pass	-	
14	-	22/08/2022	-	1	14.5	98.5	90.5	-2.5	Pass	-	
15	-	22/08/2022	-	1	16.0	97.5	85.5	-3.0	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)

<u>Appendi</u>	x D – NATA	A Test Results	



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

David Burns

22/08/2022

Date:

Client:		BMD Urban				Job No:	BMD2641
Project:		Newhaven Esta	ite - Stage 18 (I	Level 1)		Report:	1
Location:		Tarneit					
	İ						<u> </u>
Sample No		1	2	3			
Date Tested		17/08/2022	17/08/2022	17/08/2022			
Time Tested		PM	PM	PM			
	1		T				<u> </u>
Test Location		Refer	Refer	Refer			
		to	to	to			
		Plan	Plan	Plan			
Level/Layer		1	1	1			
Layer Thickness	mm	200	200	200			
Test Depth	mm	175	175	175			
Field Wet Density	t/m³	1.95	1.96	1.97			
Field Moisture Content	%	21.8	23.2	23.5			
Material:		Site Derived	Site Derived	Site Derived			
		Clay	Clay	Clay			
Oversize Material	WET, %	16.0	15.0	14.0			
Sieve Size	mm	37.5	37.5	37.5			
Peak Converted Wet Density	t/m³	2.00	2.00	2.01			
Optimum Moisture Content	%	24	25	25.5			
					•		
Moisture Ratio	%	91	93	92.5			
Moisture Variation	%	-1.5	-2.0	-1.5			
from OMC		Drier	Drier	Drier			
Density Ratio	%	95.0	96.0	96.0			
Specification:	95% STD				Test Selection:	1	N/A
Notes:	Ref: 1120	0394-1 (SI01)					
Test Method	AS1289 5.	8.1, 5.7.1, 2.1.1, 1.1			Sampling Method:	AS 1289	1.2.1 6.4(b)
NATA	NATA Accre	dited Laboratory No. 2	20172		Approved Signatory:	Ω	

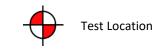
Accreditation for compliance with ISO/IEC 17025 - Testing

The results of tests, calibrations and/or measurements included

in this document, are traceable to Australian / National Standards

WORLD RECOGNISED ACCREDITATION









WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REFER TO BARWON WATER'S CUSTOMER GUIDE FOR WORKS ON OR NEAR BARWON WATER ASSETS' AND MAKE APPLICATIONS AS PER BARWON WATER'S REQUIREMENTS.

WARNING

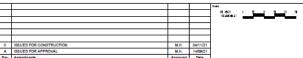
BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUGED ELECTRICAL CARRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES

THE LOCATION OF EXPONENCE AS EXPONENT TO LAY AND THREE
BEACT FOR THIS WALLD BE FIRST SERVICE AS EXPONENT TO LAY AND THREE
GIVES THAT ALL RESITION OF SERVICE ARE EXPONENT SERVICE
OFFICE FIRST SERVICE AS EXPONENT FOR SERVICE AS EXPONENT SERVICE FOR SERVICE AS EXPONENT SERVICE AS EXPONENT SERVICE AS EXPONENT SERVICE AS EXPONENT SERVICES FOR SERVICE AS EXPONENT SERVICES AS EXPONEN









P.CLIFTON J. KOEHLER Authorised M.HOLMES Date 14/09/21

NEWHAVEN ESTATE STAGE 18 ROAD AND DRAINAGE FACE PLAN WYNDHAM CITY COUNCIL PEET NO.1895 PTY LTD

CONSTRUCTION 304671CR200

PROJECT: CLIENT: DATE: Newhaven Estate - Stage-18 (Level 1) **BMD Urban** 17/08/2022 LOCATION: PROJECT No: SITE PLAN SKETCH—NOT TO SCALE Tarneit 1120 0394-1 (SI01)





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

Client:		BMD Urban				Job No:	BMD2641
Project:		Newhaven Esta	te - Stage 18 (Level 1)		Report:	2
Location:		Tarneit					
	İ		_		Г		Ι
Sample No		4	5	6			
Date Tested		18/08/2022	18/08/2022	18/08/2022			
Time Tested		PM	PM	PM			
T	ı	Defer	Defer	Defen	<u> </u>		<u> </u>
Test Location		Refer to	Refer to	Refer to			
		Plan	Plan	Plan			
		Fiaii	riaii	riaii			
Level/Layer		2	2	2			
Layer Thickness	mm	200	200	200			
Test Depth	mm	175	175	175			
Field Wet Density	t/m³	1.96	2.00	1.92			
Field Moisture Content	%	21.2	20.2	41.6			
Material:		Site Derived Clay	Site Derived Clay	Site Derived Clay			
	·						
Oversize Material	WET, %	16.9	16.0	16.0			
Sieve Size	mm	37.5	37.5	37.5			
Peak Converted Wet Density	t/m³	2.00	2.04	1.96			
Optimum Moisture Content	%	23	21.5	44			
	. 1						
Moisture Ratio	%	92	94	94.5			
Moisture Variation	%	-1.5	-1.0 Drion	-2.0 Drian			
from OMC	%	Drier 95.5	Drier 96.0	Drier			
Density Ratio	90	93.3	90.0	95.5			
Specification:	95% STD				Test Selection:	N	/A
Notes:	Ref: 1120	0394-1 (SI02)					
Test Method	AS1289 5.8	8.1, 5.7.1, 2.1.1, 1.1			Sampling Method:	AS 1289 1	2.1 6.4(b)
	NATA Accre	dited Laboratory No. 2	20172				

WORLD RECOGNISED ACCREDITATION

Accreditation for compliance with ISO/IEC 17025 - Testing

The results of tests, calibrations and/or measurements included

in this document, are traceable to Australian / National Standards

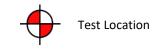
Approved Signatory:

Date:

David Burns 22/08/2022



Tarneit







WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REFER TO BARWON WATER'S CUSTOMER GUIDE FOR WORKS ON OR NEAR BARWON WATER ASSETS' AND MAKE APPLICATIONS AS PER BARWON WATER'S REQUIREMENTS.

WARNING

BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUCED BLECTRICAL CURRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

EDILARE OF UNDERSEGUIDO OUESPIEDO SERVICES DE LACADA O ELEVADO DE PROPERTO DE LACADA O ELEVADO DE ESPORTA DE LACADA O ELEVADO DE PROPERTO DE LACADA O ELEVADO DE LACADA DE LACAD



CONSTRUCTION 304671CR200

=	A ISSUED FOR APPROVAL Rev Amendments	M.H. Approved	1409/21 Date	relation. Against Associate Pty Ltd does not and shall not ensure any responsibility or hability whateverse in any literal party solving solving any uses or relations by 1940 party on the section of the dissociation.	414 LA TROBE STREET PO BOX 160 VICTORIA 8007 AUSTRALIA T 61 3 9 apline.com.au ABN 55 050	993 7000 A41/01 AFD
PROJECT:			CLIENT:			DATE:
Newhaven Estate – Sta	age-18 (Level 1)		BMD Urban			18/08/2022
LOCATION:			PROJECT No:			

1120 0394-1 (SI02)

SITE PLAN SKETCH—NOT TO SCALE





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

David Burns

22/08/2022

Date:

Client:		BMD Urban				Job No:	BMD2641
Project:		Newhaven Esta	te - Stage 18 (Level 1)		Report:	3
Location:		Tarneit					
					ı		ı
Sample No		7	8	9			
Date Tested		19/08/2022	19/08/2022	19/08/2022			
Time Tested		PM	PM	PM			
	1			T	1		
Test Location		Refer	Refer	Refer			
		to	to	to			
		Plan	Plan	Plan			
Level/Layer		3	3	3			
Layer Thickness		200	200	200			
•	mm	175	175	175			
Test Depth	mm t/m³	2.02	2.03	2.04			
Field Wet Density							
Field Moisture Content	%	15.9	21.2	19.5			
Material:		Site Derived Clay	Site Derived Clay	Site Derived Clay			
		•		<u>'</u>			
Oversize Material	WET, %	17.0	16.1	14.0			
Sieve Size	mm	37.5	37.5	37.5			
Peak Converted Wet Density	t/m³	2.00	2.01	2.04			
Optimum Moisture Content	%	18.5	24	21			
Moisture Ratio	%	86	88.5	92.5			
Moisture Variation	%	-2.0	-2.5	-1.5			
from OMC		Drier	Drier	Drier			
Density Ratio	%	98.5	98.5	98.0			
Specification:	95% STD				Test Selection:	N	/A
Notes:	Ref: 1120	0394-1 (SI03)					
Test Method	AS1289 5.	8.1, 5.7.1, 2.1.1, 1.1			Sampling Method:	AS 1289 1	.2.1 6.4(b)
	NATA Accre	dited Laboratory No. 2	20172			(1)	
NATA			ISO/IEC 17025 - Toet	ting	Approved Signatory:	V/	

The results of tests, calibrations and/or measurements included

in this document, are traceable to Australian / National Standards

R001-Ver1/ December 2018

WORLD RECOGNISED ACCREDITATION









WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REFER TO BARWON WATER'S CUSTOMER GUIDE FOR WORKS ON OR NEAR BARWON WATER ASSETS' AND MAKE APPLICATIONS AS PER BARMON WATER'S REQUIREMENTS.

WARNING

BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUCED BLECTRICAL CURRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

WARNING

WARNING

BEMARE OF UNDERGROUND/OVERHEAD SERVICES
THE LECTURE OF DEVICES OF DEFENDED TO DAY AND THE FOOL FOR THE DAY AND THE FOOL FOR THE DAY AND THE FOOL FOR THE DAY AND THE FOOL FOR THE DAY AND THE PROPERTY OF THE PROPERT



		SGUED FOR APPROVAL	M.H.	140921	retainer. Spile Australia Pty Ltd does not and shall not assume any	414 LA TROBE STREET PO B	BOX 16064 MELBOURNE	Authorised	Date	COMOTRUE	TION DIN	
•		ESUED FOR APPROVAL.	Approved	Date	required big or boddy whatever to any third party which put of any use or retiremently third party on the context of this discussmit.		1 55 050 029 635	M.HOLMES	14/09/21	CONSTRUC	11UN 304671C	:R200
PROJECT:				CLIENT:			DATE:					
Newhaven Estate – Stage-18 (Level 1)			BMD Urban				19/08/2023				4.6	
LOCATION:				PROJECT No:								A&
Tarneit				1120 0394-1 (SI03)				SITE PLAN S	SKETCH—NOT TO SC	CALE		





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

Client: **BMD** Urban Job No: BMD2641 Project: Newhaven Estate - Stage 18 (Level 1) Report: 4 Location: Tarneit 10 12 11 Sample No 20/08/2022 20/08/2022 20/08/2022 Date Tested PM PM PM Time Tested Refer Refer Refer Test Location to to to Plan Plan Plan 1 1 1 Level/Layer 200 200 200 Layer Thickness mm 175 175 175 Test Depth mm t/m³ 2.02 2.03 2.12 Field Wet Density 18.7 17.9 19.9 Field Moisture Content % Material: Site Derived Site Derived Site Derived Clay Clay Clay 13.6 15.0 14.8 WET, % Oversize Material 37.5 37.5 37.5 Sieve Size mm 2.03 2.01 t/m³ 2.12 Peak Converted Wet Density 22 20 23 Optimum Moisture Content % **Moisture Ratio** 85 89.5 86.5 % **Moisture Variation** % -3.0 -1.5 -3.0 from OMC Drier Drier Drier **Density Ratio** % 98.0 99.0 98.5

Specification: 95% STD Test Selection: N/A

Notes: Ref: 1120 0394-1 (SI04)

Test Method AS1289 5.8.1, 5.7.1, 2.1.1, 1.1 Sampling Method: AS 1289 1.2.1 6.4(b)

NATA
WORLD RECOGNISED
ACCREDITATION

NATA Accredited Laboratory No. 20172

Accreditation for compliance with ISO/IEC 17025 - Testing

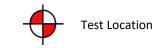
The results of tests, calibrations and/or measurements included

in this document, are traceable to Australian / National Standards

Approved Signatory:

David Burns 22/08/2022









WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REFER TO BARWON WATER'S CUSTOMER GUIDE FOR WORKS ON OR NEAR BARWON WATER ASSETS' AND MAKE APPLICATIONS AS PER BARWON WATER'S REQUIREMENTS.

WARNING

BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUGED ELECTRICAL CARRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES

THE LOCATION OF EXPONENCE AS EXPONENT TO LAY AND THREE
BEACT FOR THIS WALLD BE FIRST SERVICE AS EXPONENT TO LAY AND THREE
GIVES THAT ALL RESITION OF SERVICE ARE EXPONENT SERVICE
OFFICE FIRST SERVICE AS EXPONENT FOR SERVICE AS EXPONENT SERVICE FOR SERVICE AS EXPONENT SERVICE AS EXPONENT SERVICE AS EXPONENT SERVICE AS EXPONENT SERVICES FOR SERVICE AS EXPONENT SERVICES AS EXPONEN



	1 / 1 /	NO SERVICE	17	BM I	1720		6	1503
				Bode				
				H ISH	0	-	1	3 3
				1		_	_	_
]				
]				
0	ISSUED FOR CONSTRUCTION	M.H.	00/11/21]				
A	ISSUED FOR APPROVAL	M.H.	140921]				
Rev	Amendments	Approved	Date	1				





P.CLIFTON J. KOEHLER Authorised M.HOLMES Date 14/09/21

NEWHAVEN ESTATE STAGE 18 ROAD AND DRAINAGE FACE PLAN WYNDHAM CITY COUNCIL PEET NO.1895 PTY LTD

CONSTRUCTION 304671CR200

PROJECT: CLIENT: DATE: Newhaven Estate - Stage-18 (Level 1) **BMD Urban** 20/08/2022 LOCATION: PROJECT No: SITE PLAN SKETCH—NOT TO SCALE Tarneit 1120 0394-1 (SI04)





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

David Burns

23/08/2022

Date:

Client:		BMD Urban		Job No:	BMD2641		
Project:		Newhaven Esta	ate - Stage 18 (I	Report:	5		
Location:	Tarneit						
Sample No		13	14	15			
Date Tested		22/08/2022	22/08/2022	22/08/2022			
Time Tested		PM	PM	PM			
Test Location	ſ	Refer	Refer	Refer			
		to Plan	to Plan	to Plan			
Level/Layer		1	1	1			
Layer Thickness	mm	200	200	200			
Test Depth	mm	175	175	175			
Field Wet Density	t/m³	2.04	2.12	2.09			
Field Moisture Content		22.3	26.2	21.3			
Material:		Site Derived Clay	Site Derived Clay	Site Derived Clay			
	1				1		1
Oversize Material	WET, %	15.5	14.5	16.0			
Sieve Size	mm	37.5	37.5	37.5			
Peak Converted Wet Density	t/m³	2.02	2.13	2.11			
Optimum Moisture Content	%	25.5	29	25			
Moisture Ratio	%	87.5	90.5	85.5			
Moisture Variation	%	-2.5	-2.5	-3.0			
from OMC		Drier	Drier	Drier			
Density Ratio	%	98.5 98.5 97.5					
Specification:	95% STD				Test Selection:	N	/A
Notes:	Ref: 1120 0394-1 (SI05)						
Test Method	st Method AS1289 5.8.1, 5.7.1, 2.1.1, 1.1 Sampling Method: AS 1289 1.2.1						.2.1 6.4(b)
NATA	ting	Approved Signatory:					

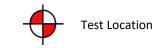
The results of tests, calibrations and/or measurements included

in this document, are traceable to Australian / National Standards

WORLD RECOGNISED ACCREDITATION



Tarneit







WORKS ON OR NEAR BARWON WATER ASSETS - CONTRACTOR TO REFER TO BARWON WATER'S CUSTOMER GUIDE FOR WORKS ON OR NEAR BARWON WATER ASSETS' AND MAKE APPLICATIONS AS PER BARWON WATER'S REQUIREMENTS.

WARNING

BEWARE OF TRANSMISSION LINES TRANSMISSION POWER LINES IN CLOSE PROMMITY OF WORKS, INCUCED BLECTRICAL CURRENTS MAY OCCUR. APPROPRIATE SAFETY MEASURES TO BE CARRED OUT.

EDILARE OF UNDERSEGUIDO OUESPIEDO SERVICES DE LACADA O ELEVADO DE PROPERTO DE LACADA O ELEVADO DE ESPORTA DE LACADA O ELEVADO DE PROPERTO DE LACADA O ELEVADO DE LACADA DE LACAD



n.		ISSUED FOR APPROVAL Amendments	M.H. Approved	1409/21 Date		responsibility or labelity whatevers to any Distripacty action any use or reference by Distripacity on the content of this document.	VICTORIA 8007 AUSTR aplire.com.au	ADN 55 050		M.HOLMES
PROJECT:			CLI	IENT:	DATE:					
Newhaven Estate – Stage-18 (Level 1)			BMD Urban					22/08/2022		
LOCATION:				PR	OJECT No:					

1120 0394-1 (SI05)

CONSTRUCTION 304671CR200

A&Y ASSOCIATES GEOTECHNICAL ENGINEERING CONSULTANTS

SITE PLAN SKETCH—NOT TO SCALE

Date 14/09/21