



CIVIL GEOTECHNICAL SERVICES
ABN 26 474 013 724
PO Box 678 Croydon Vic 3136
Telephone: 9723 0744 Facsimile: 9723 0799

30th September 2022

Our Reference: 22571:NB1361

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
MARIGOLD – STAGE 7 (TARNEIT)**

Please find attached our Report No's 22571/R001 to 22571/R016 which relate to the field density testing that was conducted within the filled allotments at the above subdivision. The level 1 inspections and associated field density testing commenced in August 2022 and was completed in September 2022.

The inspections and testing of the earthworks was undertaken in general accordance with the Level 1 requirements of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments.

The site inspection and testing was performed by experienced geotechnicians from this office. Any areas that were deemed unsatisfactory were reworked and retested under their supervision. The testing was performed to the relevant Australian Standards and the accompanying test reports carry NATA endorsement. The attached compaction results, which were located randomly throughout the fill profile, are considered to be representative of the bulk fill materials that were placed across the reported allotments by Winslow Constructors during the aforementioned period. The approximate locations of the field density tests can be seen on the attached plan (Figure 1).

We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

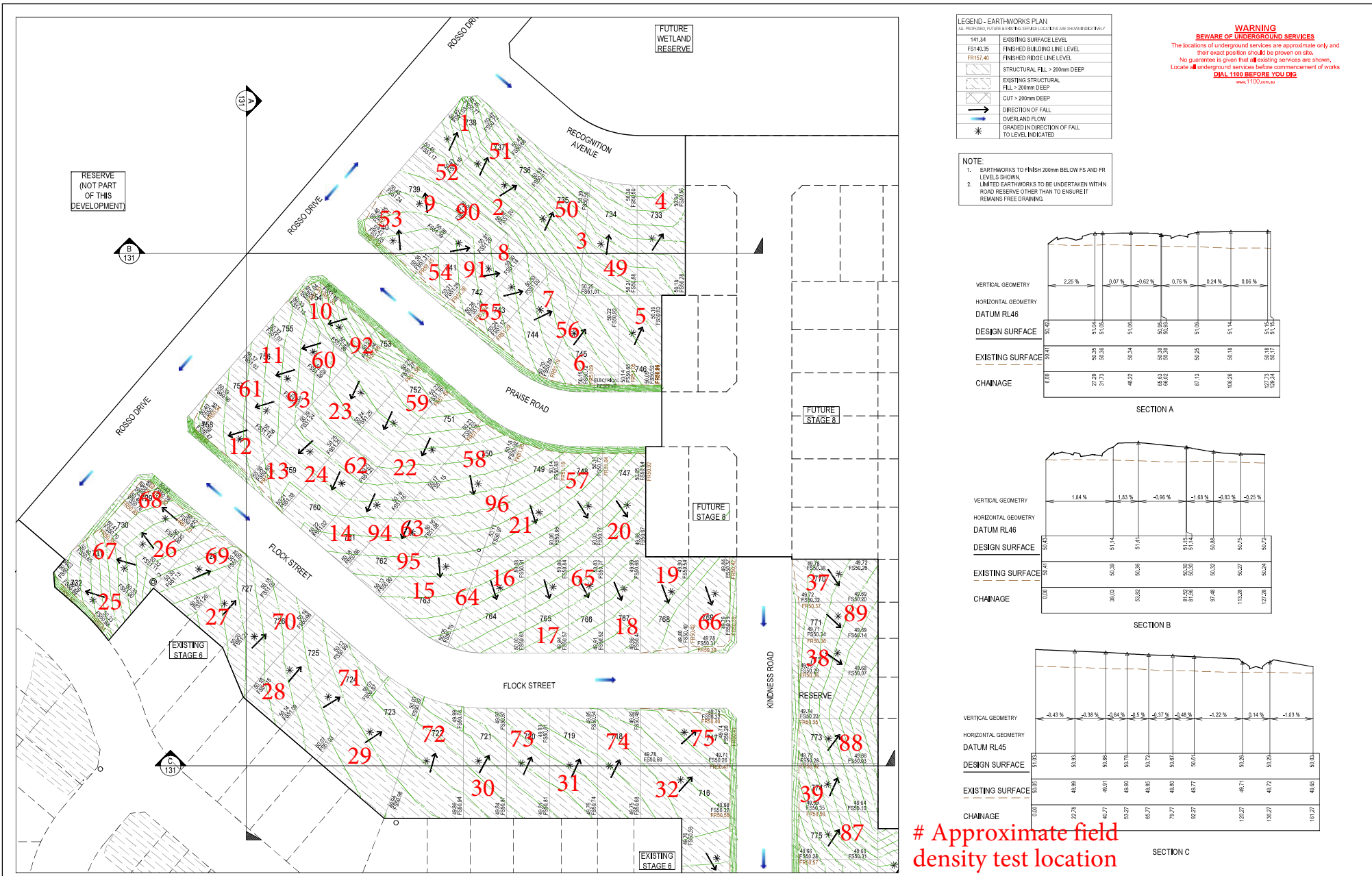
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a faint circular stamp.

Nick Brock

FIGURE 1 (1 of 2)



LEGEND - EARTHWORKS PLAN
 ALL PROPOSED FILL AND CUT ARE SHOWN INDICATIVELY

141.34	EXISTING SURFACE LEVEL
FS140.35	FINISHED BUILDING LINE LEVEL
FR157.40	FINISHED RIDGE LINE LEVEL
[Symbol]	STRUCTURAL FILL > 200mm DEEP
[Symbol]	EXISTING STRUCTURAL FILL > 200mm DEEP
[Symbol]	CUT > 200mm DEEP
[Symbol]	DIRECTION OF FALL
[Symbol]	OVERLAND FLOW
[Symbol]	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED

WARNING
BWARE OF UNDERGROUND SERVICES
 The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that existing services are shown. Locate all underground services before commencement of works
CALL 1100 BEFORE YOU DIG
 www.1100.com.au

NOTE:
 1. EARTHWORKS TO FINISH 200mm BELOW FS AND FR LEVELS SHOWN.
 2. LIMITED EARTHWORKS TO BE UNDERTAKEN WITHIN ROAD RESERVE OTHER THAN TO ENSURE IT REMAINS FREE DRAINING.

SECTION A

VERTICAL GEOMETRY	2.25%	0.07%	-0.62%	0.76%	0.24%	0.66%
HORIZONTAL GEOMETRY						
DATUM RL46						
DESIGN SURFACE	50.42	51.04	51.06	51.06	50.85	51.15
EXISTING SURFACE	50.41	50.36	50.38	50.39	50.28	50.19
CHAINAGE	0.00	97.39	317.3	462	65.83	87.13
		97.39	317.3	462	65.83	106.26
						127.73
						128.34

SECTION B

VERTICAL GEOMETRY	1.84%	1.83%	-0.86%	-1.68%	-0.83%	-0.25%
HORIZONTAL GEOMETRY						
DATUM RL46						
DESIGN SURFACE	50.43	51.14	51.41	51.14	50.86	50.72
EXISTING SURFACE	50.41	50.39	50.35	50.29	50.24	50.24
CHAINAGE	0.00	38.03	53.82	81.26	91.48	113.26
		38.03	53.82	81.26	91.48	113.26
						127.26

SECTION C

VERTICAL GEOMETRY	-0.43%	-0.38%	-0.64%	-0.5%	-0.37%	-0.45%	-1.22%	0.14%	-1.03%
HORIZONTAL GEOMETRY									
DATUM RL45									
DESIGN SURFACE	51.03	51.04	51.06	51.07	50.87	50.61	50.26	50.26	50.03
EXISTING SURFACE	50.85	49.89	49.81	49.80	49.85	49.66	49.37	49.72	49.05
CHAINAGE	0.00	22.75	46.27	52.27	62.77	73.27	82.27	102.27	110.27
		22.75	46.27	52.27	62.77	73.27	82.27	102.27	110.27

Approximate field density test location

REFER SHEET 2360E-007-131 FOR CONTINUATION

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DRAFTER	DESIGNER	CHECKER	APPROVER	PLAN OF SUB. NO.
A	07.06.22	ISSUED TO COUNCIL FOR APPROVAL	D.MARAMBA	C.BARTOLABA	C.SEXTON	M.BOUWMEESTER	PS900882T
B	20.07.22	LEVELS, CONTOURS & SECTIONS	K.KANG	C.BARTOLABA	C.SEXTON	M.BOUWMEESTER	PERMIT REF. NO. WYP1035517.01

SUBJECT TO APPROVAL

Scale 1:500
SCALE AS SHOWN AT A1

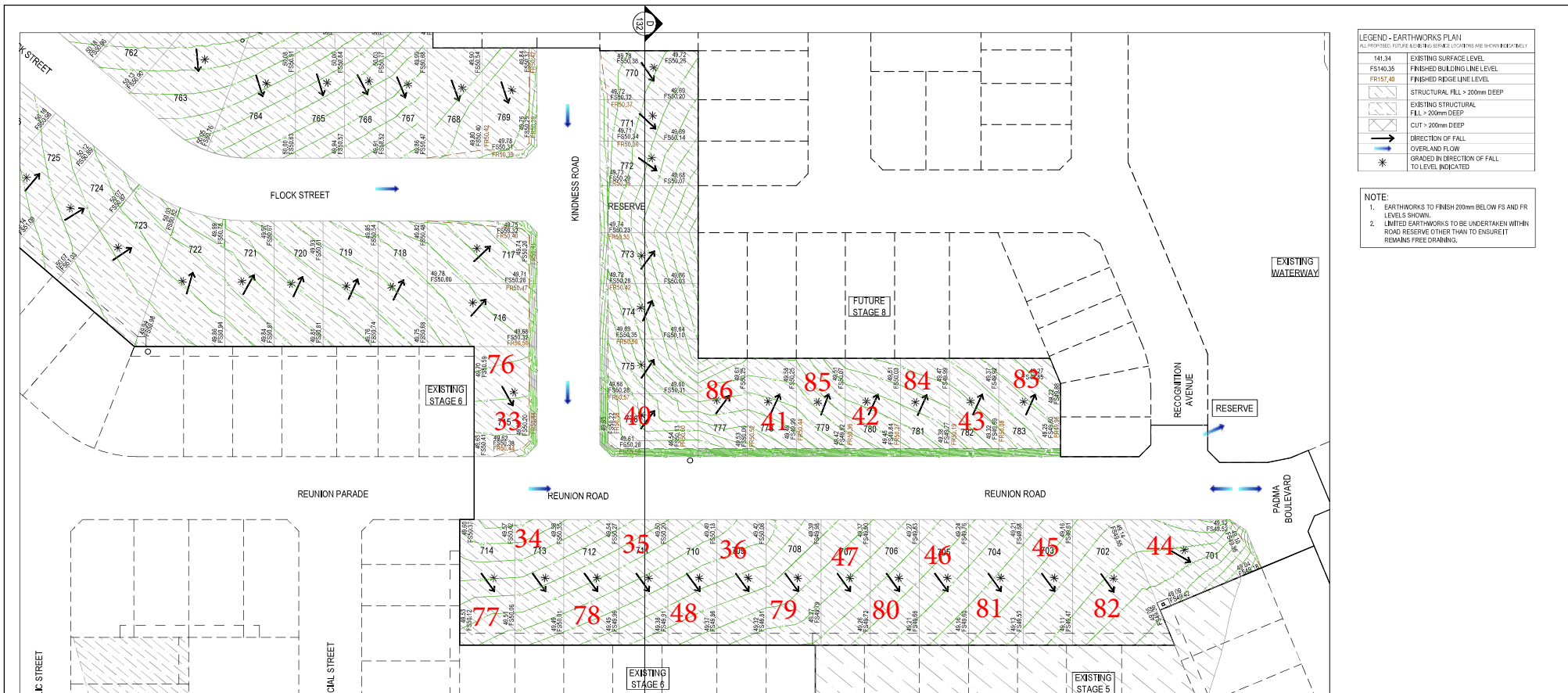
Member of the Sirtano Group
 Collins Square, Tower 4, Level 20, 727 Collins St
 Melbourne, VIC 3008
 Ph 03 9514 1500

GROWLAND

MELBORN OFFICE 359 F9	PROJECT ID / DRAWING NO. 2360E-007-131	SHEET NO. 01 of 02	REVISION A
--------------------------	---	-----------------------	---------------

© SMC 2021. Digital information supplied by this office is for information only, in the event of any discrepancies this should be discussed with the superintendent. Set out should be carried out in accordance with relevant Authority standard drawings or as nominated by SMC.

FIGURE 1 (2 of 2)



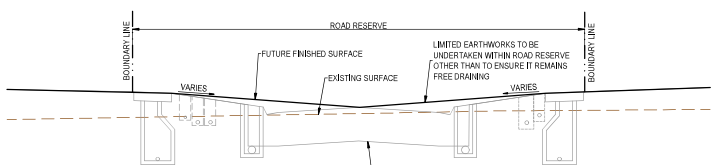
LEGEND - EARTHWORKS PLAN
ALL POSITIVE VALUES & THE NEGATIVE VALUES ARE SHOWN IN METERS

141.34	EXISTING SURFACE LEVEL
FS140.35	FINISHED BUILDING LINE LEVEL
FR157.40	FINISHED RIDGE LINE LEVEL
	STRUCTURAL FILL > 200mm DEEP
	EXISTING STRUCTURAL FILL > 200mm DEEP
	CUT > 200mm DEEP
	DIRECTION OF FALL
	COVER AND FLOW
*	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED

NOTE:

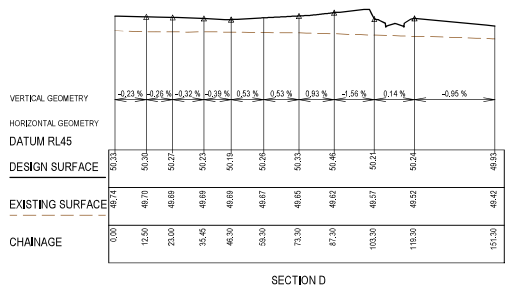
- EARTHWORKS TO FINISH 200mm BELOW FS AND FR LEVELS SHOWN.
- LIMITED EARTHWORKS TO BE UNDERTAKEN WITHIN ROAD RESERVE OTHER THAN TO ENSURE IT REMAINS FREE DRAINING.

Approximate field density test location



NOTE:
 CONTRACTOR TO CONFIRM THE 3D TIN FILE PROVIDED IS ABOVE FINAL LEVEL PRIOR TO ANY EXCAVATION WORKS.

BULK EARTHWORKS TYPICAL SECTION
 NOT TO SCALE



SECTION D

WARNING
BEWARE OF UNDERGROUND SERVICES
 The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works. **DIAL 1100 BEFORE YOU DIG**
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DRAFTER	DESIGNER	CHECKER	APPROVER	PLAN OF SUB. NO.
A	07.06.22	ISSUED TO COUNCIL FOR APPROVAL	D.MARAMAG	C.BARTOLABA	C.SEXTON	M.BOUWMEESTER	PS900682T
B	20.07.22	LEVELS, CONTOURS & SECTIONS	K.KANG	C.BARTOLABA	C.SEXTON	M.BOUWMEESTER	PERMIT REF. NO. WYP1035517.01

SUBJECT TO APPROVAL

Scale 1:500
Scale as shown at A1

Marigold - Stage 7
Wyndham City Council
Early Bulk Earthworks
Earthworks Setout Plan - 2

MECHANICAL: 359 F9
 PROJECT ORGANISATION: 2360E-007-132
 SHEET NO.: 02 of 02
 REVISION: A



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R001
 Date Issued 17/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	11/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	4	5	6
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	2.11	2.11	2.13	2.05	2.09
Field moisture content	%	20.4	19.1	19.3	16.7	16.7

Test procedure AS 1289.5.7.1

Test No	1	2	3	4	5	6
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.16	2.15	2.18	2.09	2.10
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	21.5	21.5	19.5	18.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.0	98.5	98.0	98.5	99.5	99.5
-----------------------------------	---	------	------	------	------	------	------

Material description

No 1 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R002
 Date Issued 22/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	12/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	9	10	11	12
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	2.10	2.03	2.11	2.10	2.11
Field moisture content	%	18.2	19.8	19.2	19.0	18.8

Test procedure AS 1289.5.7.1

Test No	7	8	9	10	11	12
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.14	2.00	2.11	2.13	2.13
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	20.5	22.5	21.5	21.5	22.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	2.0% dry	2.0% dry	2.5% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.0	101.5	99.5	98.5	99.0	99.0
-----------------------------------	---	------	-------	------	------	------	------

Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R003
 Date Issued 16/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	MARIGOLD - STAGE 7	Date tested	13/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	11:30
---------	------------	-----------------	--------	-------	-------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	14	15	16	17	18
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.93	1.92	1.94	1.97	1.95
Field moisture content	%	21.1	20.1	19.9	19.6	19.6

Test procedure AS 1289.5.7.1

Test No	13	14	15	16	17	18
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.96	1.97	1.96	2.00	1.99
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.5	20.5	20.0	21.5	20.0

Moisture Variation From Optimum Moisture Content	2.0% dry	0.5% dry	0.0%	2.0% dry	1.0% dry	0.0%
--	----------	----------	------	----------	----------	------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	99.0	97.5	99.0	98.0	98.0	99.0
-----------------------------------	---	------	------	------	------	------	------

Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R004
 Date Issued 19/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	MARIGOLD - STAGE 7	Date tested	15/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:32
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	19	20	21	22	23	24
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.84	1.81	1.99	1.94	1.99
Field moisture content	%	21.4	22.7	19.3	18.6	21.1

Test procedure AS 1289.5.7.1

Test No	19	20	21	22	23	24
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.87	1.83	2.01	1.96	2.02
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.0	25.0	21.5	20.5	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	99.5	99.0	99.0	99.0	98.0
-----------------------------------	---	------	------	------	------	------	------

Material description

No 19 - 24 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R005
 Date Issued 23/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	16/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	25	26	27	28	29	30	
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	
Field wet density	t/m ³	2.02	2.01	2.03	2.01	2.00	2.04
Field moisture content	%	17.0	19.8	18.6	18.9	18.4	18.0

Test procedure AS 1289.5.7.1

Test No	25	26	27	28	29	30	
Compactive effort	Standard						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m ³	2.03	2.03	2.06	2.03	2.03	2.08
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	19.0	22.5	21.0	21.0	21.0	20.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.0% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	99.5	98.5	98.5	99.5	98.5	98.0
-----------------------------------	---	------	------	------	------	------	------

Material description

No 25 - 30 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R006
 Date Issued 29/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	MARIGOLD - STAGE 7	Date tested	17/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:38
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	31	32	33	34	35	36
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	2.17	2.09	2.11	2.11	2.12
Field moisture content	%	16.8	19.8	19.5	20.1	17.7

Test procedure AS 1289.5.7.1

Test No	31	32	33	34	35	36
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.18	2.09	2.08	2.09	2.08
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	22.5	21.5	22.5	20.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	99.5	99.5	101.5	101.0	101.5	102.5
----------------------------------	---	------	------	-------	-------	-------	-------

Material description

No 31 - 36 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R007
 Date Issued 24/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	MARIGOLD - STAGE 7	Date tested	18/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:11
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	37	38	39	40	41	42
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	2.24	2.22	2.10	2.09	2.18
Field moisture content	%	16.8	20.1	16.9	21.7	19.1

Test procedure AS 1289.5.7.1

Test No	37	38	39	40	41	42
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.25	2.24	2.09	2.11	2.18
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	17.5	22.5	19.0	21.5	21.5

Moisture Variation From Optimum Moisture Content	0.5% dry	2.5% dry	2.0% dry	0.0%	2.0% dry	2.0% dry
--	----------	----------	----------	------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	100.0	99.0	100.0	99.0	100.0	98.0
-----------------------------------	---	-------	------	-------	------	-------	------

Material description

No 37 - 42 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R008
 Date Issued 24/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	19/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	43	44	45	46	47	48	
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	
Field wet density	t/m ³	2.08	2.07	2.05	1.99	2.04	2.01
Field moisture content	%	25.1	26.9	23.9	35.9	29.3	24.4

Test procedure AS 1289.5.7.1

Test No	43	44	45	46	47	48	
Compactive effort	Standard						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m ³	2.12	2.07	2.08	2.00	2.06	2.05
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	26.0	28.5	25.0	35.5	27.5	25.0

Moisture Variation From Optimum Moisture Content	1.0% dry	1.5% dry	1.0% dry	0.0%	1.5% wet	0.5% dry
--	----------	----------	----------	------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	100.0	98.5	99.5	99.0	98.0
-----------------------------------	---	------	-------	------	------	------	------

Material description

No 43 - 48 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R009
 Date Issued 29/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	22/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	49	50	51	52	53	54
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.98	2.02	2.02	1.99	1.99
Field moisture content	%	24.6	23.8	25.1	23.9	24.4

Test procedure AS 1289.5.7.1

Test No	49	50	51	52	53	54
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.06	2.00	2.04	1.99	2.05
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	24.0	28.0	24.0	26.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	2.5% dry	0.0%	2.0% dry	0.0%
--	------	------	----------	------	----------	------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	96.5	101.0	99.0	99.5	97.0	99.5
-----------------------------------	---	------	-------	------	------	------	------

Material description

No 49 - 54 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R010
 Date Issued 29/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	23/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
----------------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	55	56	57	58	59	60
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	175	175	175
Field wet density <i>t/m³</i>	1.94	1.94	1.93	1.98	1.97	1.94
Field moisture content <i>%</i>	28.5	25.2	34.0	28.0	27.2	30.6

Test procedure AS 1289.5.7.1

Test No	55	56	57	58	59	60
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material <i>wet</i>	0	0	0	0	0	0
Peak Converted Wet Density <i>t/m³</i>	1.99	1.96	1.95	1.99	2.01	1.98
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	28.5	25.0	34.0	29.0	27.0	31.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	1.0% dry	0.0%	0.5% dry
--	------	------	------	-------------	------	-------------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	%	97.5	98.5	99.0	99.5	98.0	98.5
--	----------	-------------	-------------	-------------	-------------	-------------	-------------

Material description

No 55 - 60 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R011
 Date Issued 01/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	24/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	61	62	63	64	65	66
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	2.00	2.06	1.94	2.01	2.04
Field moisture content	%	27.2	23.9	29.2	27.3	30.4

Test procedure AS 1289.5.7.1

Test No	61	62	63	64	65	66
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.07	2.07	1.96	2.02	2.07
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	27.0	24.0	29.0	30.5	26.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	2.5% dry	0.0%	0.0%
--	------	------	------	----------	------	------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	97.0	99.5	98.5	99.0	99.0	99.0
-----------------------------------	---	------	------	------	------	------	------

Material description

No 61 - 66 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R012
 Date Issued 01/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	25/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	67	68	69	70	71	72	
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	
Field wet density	t/m ³	2.02	2.01	2.02	2.00	2.03	2.04
Field moisture content	%	26.7	26.7	28.5	27.0	27.2	29.3

Test procedure AS 1289.5.7.1

Test No	67	68	69	70	71	72	
Compactive effort	Standard						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m ³	2.04	2.05	2.07	2.04	2.07	
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	
Optimum Moisture Content	%	26.5	26.5	28.5	27.0	27.0	29.5

Moisture Variation From Optimum Moisture Content	0.0%	0.5% wet	0.0%	0.0%	0.0%	0.0%
--	------	----------	------	------	------	------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	99.0	98.5	97.5	98.5	98.0	98.5
-----------------------------------	---	------	------	------	------	------	------

Material description

No 67 - 72 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R013
 Date Issued 01/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	26/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	73	74	75	76	77	78
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.92	1.92	1.87	1.85	1.94
Field moisture content	%	24.0	23.8	23.5	22.6	24.3

Test procedure AS 1289.5.7.1

Test No	73	74	75	76	77	78
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.94	1.95	1.90	1.92	1.97
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	26.5	24.0	22.5	22.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	0.5% dry	0.0%	0.0%	1.0% dry
--	----------	----------	----------	------	------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	99.0	98.0	98.5	96.0	98.0	97.0
-----------------------------------	---	------	------	------	------	------	------

Material description

No 73 - 78 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R014
 Date Issued 01/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	27/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:00
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	79	80	81	82	83	84	
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	
Field wet density	t/m ³	1.98	1.99	2.01	2.02	1.95	2.07
Field moisture content	%	21.0	20.5	20.9	22.9	20.9	20.9

Test procedure AS 1289.5.7.1

Test No	79	80	81	82	83	84	
Compactive effort	Standard						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m ³	2.02	2.01	2.03	2.04	1.98	2.08
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	23.0	22.5	23.5	25.0	23.5	23.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	99.0	99.0	99.0	98.5	99.5
-----------------------------------	---	------	------	------	------	------	------

Material description

No 79 - 84 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R015
 Date Issued 01/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	29/08/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	08:00
---------	------------	-----------------	--------	-------	-------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	85	86	87	88	89	90
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.90	1.90	1.91	1.85	1.91
Field moisture content	%	29.4	26.6	28.6	29.8	26.6

Test procedure AS 1289.5.7.1

Test No	85	86	87	88	89	90
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.94	1.92	1.94	1.91	1.93
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	31.5	29.0	31.5	32.5	28.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry	0.0%
--	----------	----------	----------	----------	----------	------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.0	99.0	99.0	97.0	99.0	98.0
-----------------------------------	---	------	------	------	------	------	------

Material description

No 85 - 90 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22571
 Report No 22571/R016
 Date Issued 07/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	MARIGOLD - STAGE 7	Date tested	01/09/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:30
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		91	92	93	94	95	96
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	175
Field wet density	t/m ³	1.80	1.82	1.80	1.83	1.82	1.72
Field moisture content	%	19.3	28.4	29.5	27.7	26.5	28.3

Test procedure AS 1289.5.7.1

Test No		91	92	93	94	95	96
Compactive effort		Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.83	1.86	1.83	1.89	1.86	1.79
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	22.0	30.5	32.0	30.5	27.0	31.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.5% dry	0.5% dry	2.5% dry
--	----------	----------	----------	----------	----------	----------

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	98.0	98.5	97.0	98.0	96.5
-----------------------------------	---	------	------	------	------	------	------

Material description

No 91 - 96 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry