



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

20<sup>th</sup> August 2024

Our Reference: 23819:NB1949

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING**  
**236 PAYNES ROAD – STAGE 2 (ROCKBANK)**

Please find attached our Report No's 23819/R001 to 23819/R012 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 October 2023 and was completed in November 2023.

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).

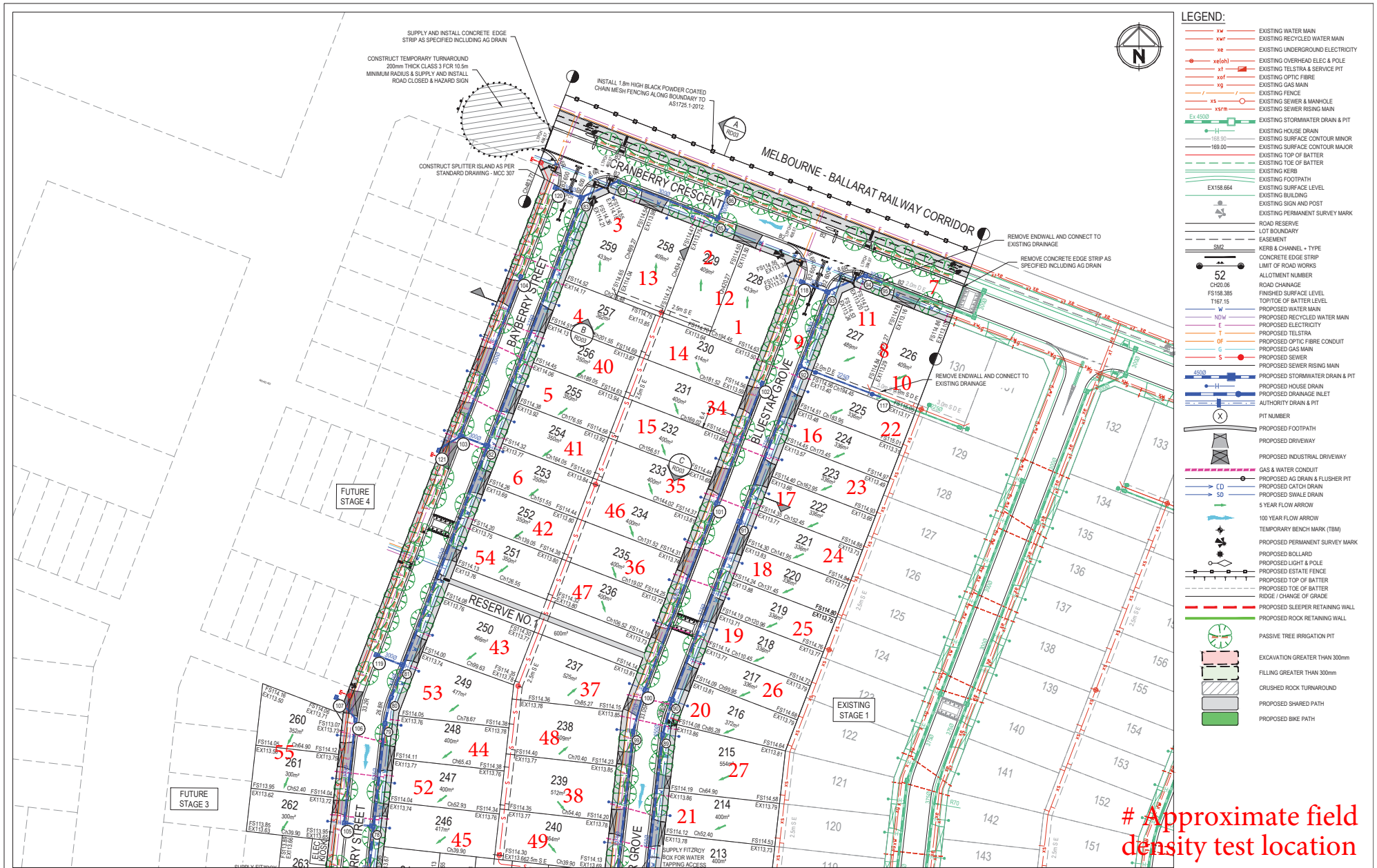
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

# FIGURE 1 (1 of 2)



REV.	ISSUED FOR TENDER	AMENDMENTS	APPROVED	DATE
A	ISSUED FOR TENDER		T. BARBOUR	24.05.2023

**WARNING**  
BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY  
AND THEIR EXACT POSITION SHOULD BE PROVIDED ON  
SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING  
SERVICES ARE SHOWN. SPECIAL CONSIDERATION  
SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES  
UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



FOR CONTINUATION REFER 121912RD05

**Colliers**

Horizontal 0  
Vertical 0

Scale 1:500 A1

PRELIMINARY 121912RD04

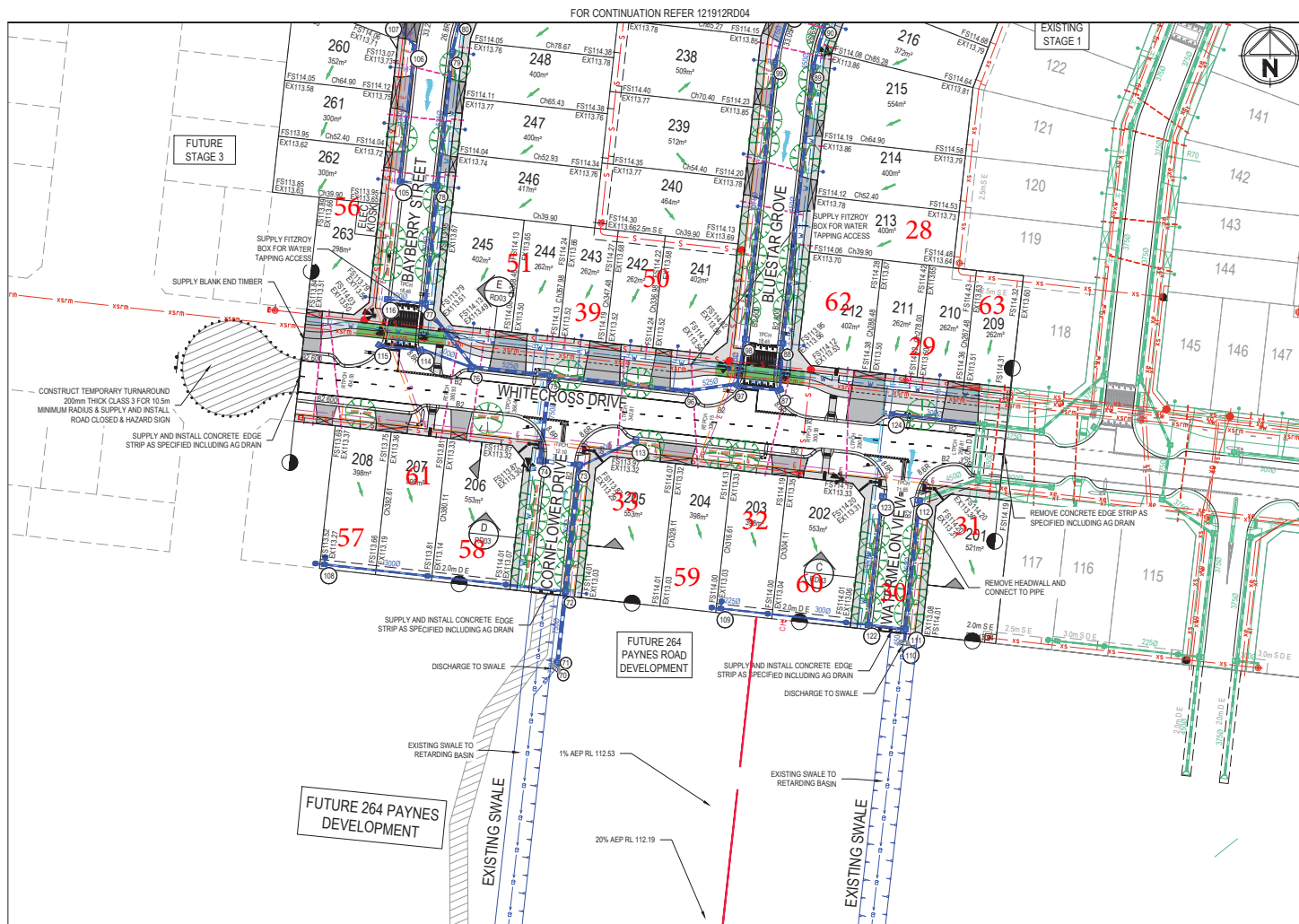
REV. A

336 PAYNES ROAD STAGE 2  
THE THORNHILL GARDENS  
CITY OF MELTON  
DETAIL PLAN - 1

PRELIMINARY 121912RD04

REV. A

FIGURE 1 (2 of 2)

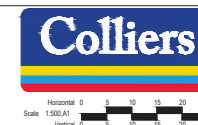


- LEGEND:**
- xv** EXISTING WATER MAIN
  - xw** EXISTING RECYCLED WATER MAIN
  - xe** EXISTING UNDERGROUND ELECTRICITY
  - xf** EXISTING OVERHEAD ELEC & POLE
  - xt** EXISTING TELSTRA & SERVICE PIT
  - xf** EXISTING OPTIC FIBRE
  - xg** EXISTING GAS MAIN
  - xs** EXISTING SEWER & MANHOLE
  - xr** EXISTING SEWER RISING MAIN
  - xd** EXISTING STORMWATER DRAIN & PIT
  - Ex 4500** EXISTING HOUSE DRAIN
  - Ex 158.90** EXISTING SURFACE CONTOUR MINOR
  - Ex 169.00** EXISTING SURFACE CONTOUR MAJOR
  - Ex 158.90** EXISTING TOP OF BATTER
  - Ex 158.90** EXISTING TOE OF BATTER
  - Ex 158.90** EXISTING KERB
  - Ex 158.90** EXISTING FOOTPATH
  - Ex 158.90** EXISTING SURFACE LEVEL
  - Ex 158.90** EXISTING BUILDING
  - Ex 158.90** EXISTING SIGN AND POST
  - Ex 158.90** EXISTING PERMANENT SURVEY MARK
  - SM2** LOT BOUNDARY
  - SM2** EASEMENT
  - SM2** KERB & CHANNEL - TYPE
  - SM2** CONCRETED EDGE STRIP
  - SM2** LIMIT OF ROAD WORKS
  - SM2** ALLUMENT NUMBER
  - SM2** ROAD CHAINE
  - SM2** FINISHED SURFACE LEVEL
  - SM2** TOP/TYPE OF BATTER LEVEL
  - W** PROPOSED WATER MAIN
  - RDW** PROPOSED RECYCLED WATER MAIN
  - E** PROPOSED ELECTRICITY
  - T** PROPOSED TELSTRA
  - OF** PROPOSED OPTIC FIBRE CONDUIT
  - G** PROPOSED GAS MAIN
  - S** PROPOSED SEWER
  - SR** PROPOSED SEWER RISING MAIN
  - 4500** PROPOSED STORMWATER DRAIN & PIT
  - 4500** PROPOSED HOUSE DRAIN
  - 4500** PROPOSED DRAINAGE INLET
  - 4500** AUTHORITY DRAIN & PIT
  - 4500** PIT NUMBER
  - 4500** PROPOSED FOOTPATH
  - 4500** PROPOSED DRIVEWAY
  - 4500** PROPOSED INDUSTRIAL DRIVEWAY
  - 4500** GAS & WATER CONDUIT
  - 4500** PROPOSED GAS DR & FLUSHER PIT
  - 4500** PROPOSED CATCH DRAIN
  - 4500** PROPOSED SWALE DRAIN
  - 4500** 5 YEAR FLOW ARROW
  - 4500** 100 YEAR FLOW ARROW
  - 4500** TEMPORARY BENCH MARK (TBM)
  - 4500** PROPOSED PERMANENT SURVEY MARK
  - 4500** PROPOSED BOLLARD
  - 4500** PROPOSED LIGHT & POLE
  - 4500** PROPOSED ESTATE FENCE
  - 4500** PROPOSED TOP OF BATTER
  - 4500** PROPOSED TOE OF BATTER
  - 4500** RIDGE / CHANGE OF GRADE
  - 4500** PROPOSED SLEEPER RETAINING WALL
  - 4500** PROPOSED ROCK RETAINING WALL
  - 4500** PASSIVE TREE IRRIGATION PIT
  - 4500** EXCAVATION GREATER THAN 300mm
  - 4500** FILLING GREATER THAN 300mm
  - 4500** CRUSHED ROCK TURNAROUND
  - 4500** PROPOSED SHARED PATH
  - 4500** PROPOSED BIKE PATH

# Approximate field  
density test location

A	ISSUED FOR TENDER	T. BARBOUR	24.05.2023
REV.	AMENDMENTS	APPD	DATE

**WARNING**  
BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY  
AND THEIR EXACT POSITION SHOULD BE PROVEN ON  
SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING  
SERVICES ARE SHOWN. SPECIAL CONSIDERATION  
SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES  
UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



PM	T. BARBOUR
DESIGNED	23.08.2022
	S. FALKENSTEIN
CHECKED	23.08.2022
	T. BARBOUR
AUTHORISED	23.08.2022
	T. BARBOUR
MELWAYS	344 C7
POS No:	PS902801L
STATUS:	

236 PAYNES ROAD STAGE 2  
THE THORNHILL GARDENS  
CITY OF MELTON  
DETAIL PLAN - 2

PRELIMINARY	121912RD05	SHEET No.	5 OF 34
		REV.	A



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R001  
Date Issued 17/10/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	12/10/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:46
---------	------------	-----------------	--------	-------------

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	175
Field wet density t/m <sup>3</sup>	1.94	1.94	1.95	1.95	1.92	1.92
Field moisture content %	24.9	25.4	24.7	25.4	24.2	25.7

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.05	2.00	2.01	2.00	2.00	2.00
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	24.5	26.0	23.5	26.0	25.0	25.5

Moisture Variation From Optimum Moisture Content	0.5% wet	0.5% dry	1.0% wet	0.5% dry	0.5% 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 ( $R_{HD}$ )	%	95.0	96.5	97.0	97.0	96.0	96.0
----------------------------	---	------	------	------	------	------	------

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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R002  
Date Issued 17/10/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 2	Date tested	13/10/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:27
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	9	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth mm	175	175	175	-	-	-
Field wet density t/m <sup>3</sup>	2.06	2.07	2.05	-	-	-
Field moisture content %	23.7	22.0	23.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	7	8	9	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of oversize material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	2.10	2.11	2.09	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	24.0	24.5	23.5	-	-	-

Moisture Variation From Optimum Moisture Content	0.0%	2.0% dry	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	98.5	98.0	-	-	-
----------------------------	---	------	------	------	---	---	---

Material description

No 7 - 9 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R003  
Date Issued 23/10/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	16/10/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:10
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	10	11	12	13	14	15
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 <sup>3</sup>	2.03	2.00	2.01	1.99	2.02	1.98
Field moisture content %	18.1	20.5	19.7	20.7	17.1	18.0

Test procedure AS 1289.5.7.1

Test No	10	11	12	13	14	15
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 <sup>3</sup>	2.04	2.05	2.06	2.02	2.03	2.01
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	18.0	21.0	19.5	21.0	17.0	20.5

Moisture Variation From Optimum Moisture Content	0.0%	0.5% dry	0.5% wet	0.0%	0.0%	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	97.0	97.0	98.5	99.0	99.0
----------------------------	---	------	------	------	------	------	------

Material description

No 10 - 15 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R004  
Date Issued 23/10/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	17/10/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:52
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	16	17	18	19	20	21
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 <sup>3</sup>	2.01	2.01	1.96	1.92	2.01	2.03
Field moisture content %	22.4	21.1	21.6	21.1	24.3	20.4

Test procedure AS 1289.5.7.1

Test No	16	17	18	19	20	21
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 <sup>3</sup>	2.04	2.04	2.01	1.94	2.03	2.08
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	22.5	21.0	22.0	21.5	23.5	20.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.5% dry	0.5% wet	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 ( $R_{HD}$ )	%	98.5	99.0	97.5	99.5	99.0	97.5
----------------------------	---	------	------	------	------	------	------

Material description

No 16 - 21 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R005  
Date Issued 25/10/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	20/10/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:14
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	22	23	24	25	26	27
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 <sup>3</sup>	1.85	1.84	1.87	1.88	1.84	1.84
Field moisture content %	22.5	22.3	22.0	22.4	23.4	24.4

Test procedure AS 1289.5.7.1

Test No	22	23	24	25	26	27
Compactive effort	Standard					
Override 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 <sup>3</sup>	1.90	1.90	1.92	1.90	1.88	1.89
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	22.5	21.5	22.5	23.0	24.0	24.5

Moisture Variation From Optimum Moisture Content	0.0%	0.5% wet	0.5% dry	0.5% dry	0.5% 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 ( $R_{HD}$ )	%	97.5	97.0	97.5	99.0	98.0	97.0
----------------------------	---	------	------	------	------	------	------

Material description

No 22 - 27 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R006  
Date Issued 13/11/23  
Tested by AM  
Date tested 08/11/23  
Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)  
Project NEW GARDENS NORTH - STAGE 2  
Location THORNHILL PARK

Feature **EARTHWORKS** Layer thickness 200 mm Time: 11:34

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	28	29	30	31	32	33
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 <sup>3</sup>	1.90	1.88	1.95	1.88	1.93	1.92
Field moisture content %	23.9	25.1	25.5	27.9	27.9	28.0

Test procedure AS 1289.5.7.1

Test No	28	29	30	31	32	33
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 <sup>3</sup>	1.91	1.92	1.96	1.93	1.99	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	26.5	27.5	28.0	30.0	30.5	30.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% 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 ( $R_{HD}$ )	%	99.0	98.0	99.0	98.0	96.5	96.5
----------------------------	---	------	------	------	------	------	------

Material description

No 28 - 33 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

*Justin Fry*

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R007  
Date Issued 14/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	09/11/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:35
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	34	35	36	37	38	39
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 <sup>3</sup>	1.87	1.87	1.85	1.84	1.86	1.87
Field moisture content %	25.4	27.4	27.7	29.0	27.6	28.3

Test procedure AS 1289.5.7.1

Test No	34	35	36	37	38	39
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 <sup>3</sup>	1.90	1.87	1.88	1.86	1.89	1.92
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.0	27.5	30.0	32.0	30.0	30.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	2.0% dry	2.5% dry	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 ( $R_{HD}$ )	%	98.5	100.0	98.5	99.0	98.5	97.0
----------------------------	---	------	-------	------	------	------	------

Material description

No 34 - 39 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R008  
Date Issued 16/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	13/11/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:21
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	40	41	42	43	44	45
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 <sup>3</sup>	1.78	1.77	1.77	1.78	1.78	1.78
Field moisture content %	21.1	19.3	20.6	21.0	21.0	20.4

Test procedure AS 1289.5.7.1

Test No	40	41	42	43	44	45
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 <sup>3</sup>	1.85	1.86	1.84	1.84	1.86	1.83
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	24.0	21.5	23.0	23.5	22.0	23.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.5% dry	1.0% 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 ( $R_{HD}$ )	%	96.0	95.0	96.5	97.0	95.5	97.5
----------------------------	---	------	------	------	------	------	------

Material description

No 40 - 45 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R009  
Date Issued 16/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	14/11/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:40
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	46	47	48	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth mm	175	175	175	-	-	-
Field wet density t/m <sup>3</sup>	1.90	1.85	1.90	-	-	-
Field moisture content %	18.1	22.3	17.2	-	-	-

Test procedure AS 1289.5.7.1

Test No	46	47	48	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of oversize material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	1.99	1.91	1.99	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	20.5	24.5	19.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	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 ( $R_{HD}$ )	%	95.5	96.5	95.5	-	-	-
----------------------------	---	------	------	------	---	---	---

Material description

No 46 - 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R010  
Date Issued 27/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	16/11/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:32
---------	------------	-----------------	--------	-------------

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	175
Field wet density t/m <sup>3</sup>	2.01	2.02	2.02	2.02	2.00	2.02
Field moisture content %	18.0	19.5	19.6	18.5	18.5	20.6

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.02	2.03	2.06	2.06	2.01	2.06
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	20.0	22.0	22.0	20.5	19.5	23.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	1.0% 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 ( $R_{HD}$ )	%	99.5	99.0	98.5	98.0	100.0	98.5
----------------------------	---	------	------	------	------	-------	------

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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R011  
Date Issued 28/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	17/11/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:25
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	55	56	57	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth mm	175	175	175	-	-	-
Field wet density t/m <sup>3</sup>	1.92	1.92	1.88	-	-	-
Field moisture content %	16.8	16.4	17.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	55	56	57	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of oversize material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	1.98	1.96	1.92	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	18.0	19.0	19.0	-	-	-

Moisture Variation From Optimum Moisture Content	1.5% 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 ( $R_{HD}$ )	%	97.5	98.0	98.0	-	-	-
----------------------------	---	------	------	------	---	---	---

Material description

No 55 - 57 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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23819  
Report No 23819/R012  
Date Issued 27/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 2	Date tested	21/11/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:21
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	58	59	60	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth mm	175	175	175	-	-	-
Field wet density t/m <sup>3</sup>	1.92	1.92	1.90	-	-	-
Field moisture content %	18.4	20.3	19.0	-	-	-

Test procedure AS 1289.5.7.1

Test No	58	59	60	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of oversize material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	1.95	1.99	1.96	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.0	22.0	21.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	1.5% 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 ( $R_{HD}$ )	%	98.0	96.5	97.0	-	-	-
----------------------------	---	------	------	------	---	---	---

Material description

No 58 - 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