



**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: 23628:NB1948

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

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

Please find attached our Report No's 23628/R001 to 23628/R017 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 2023 and was completed in September 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)

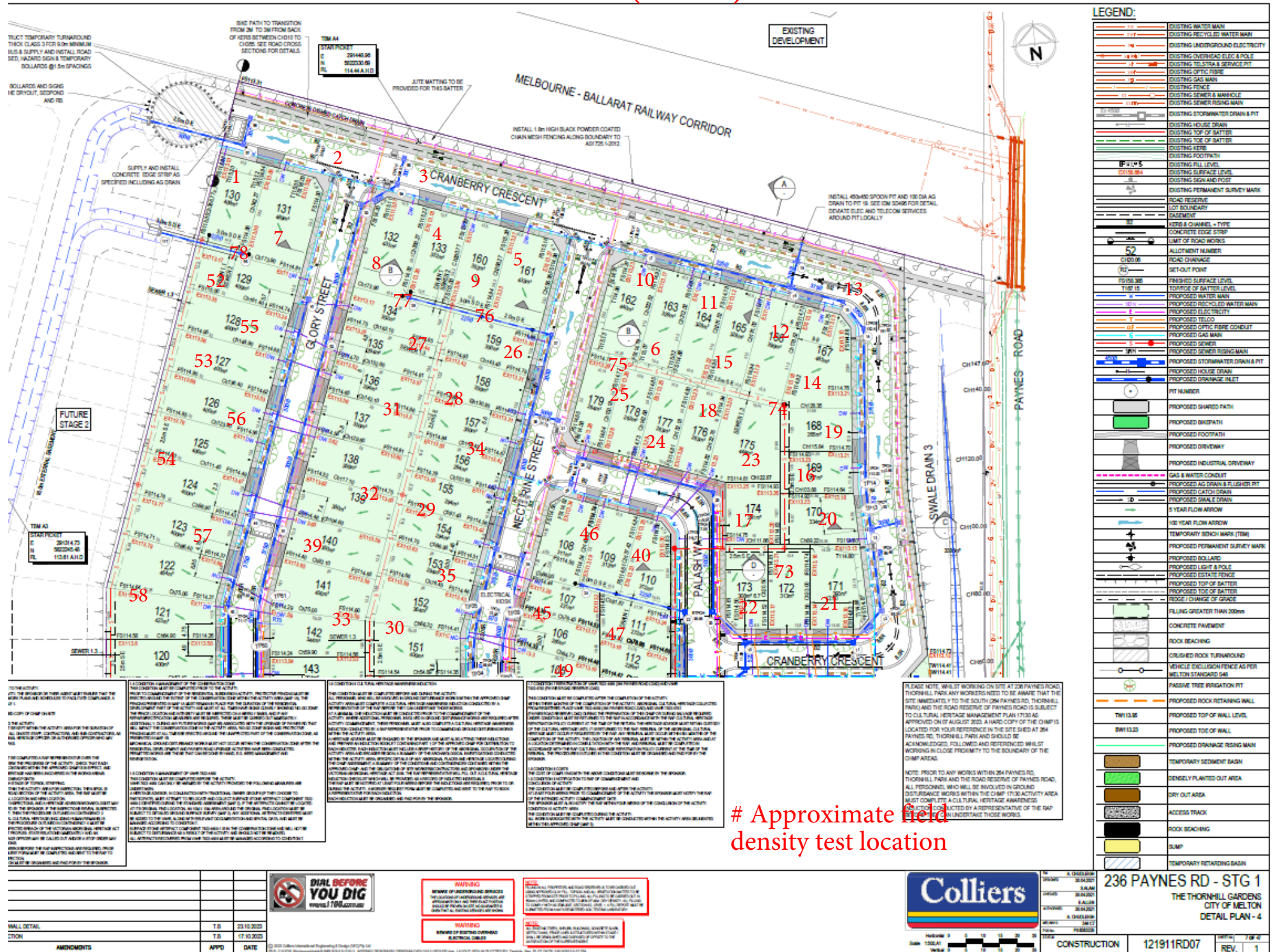
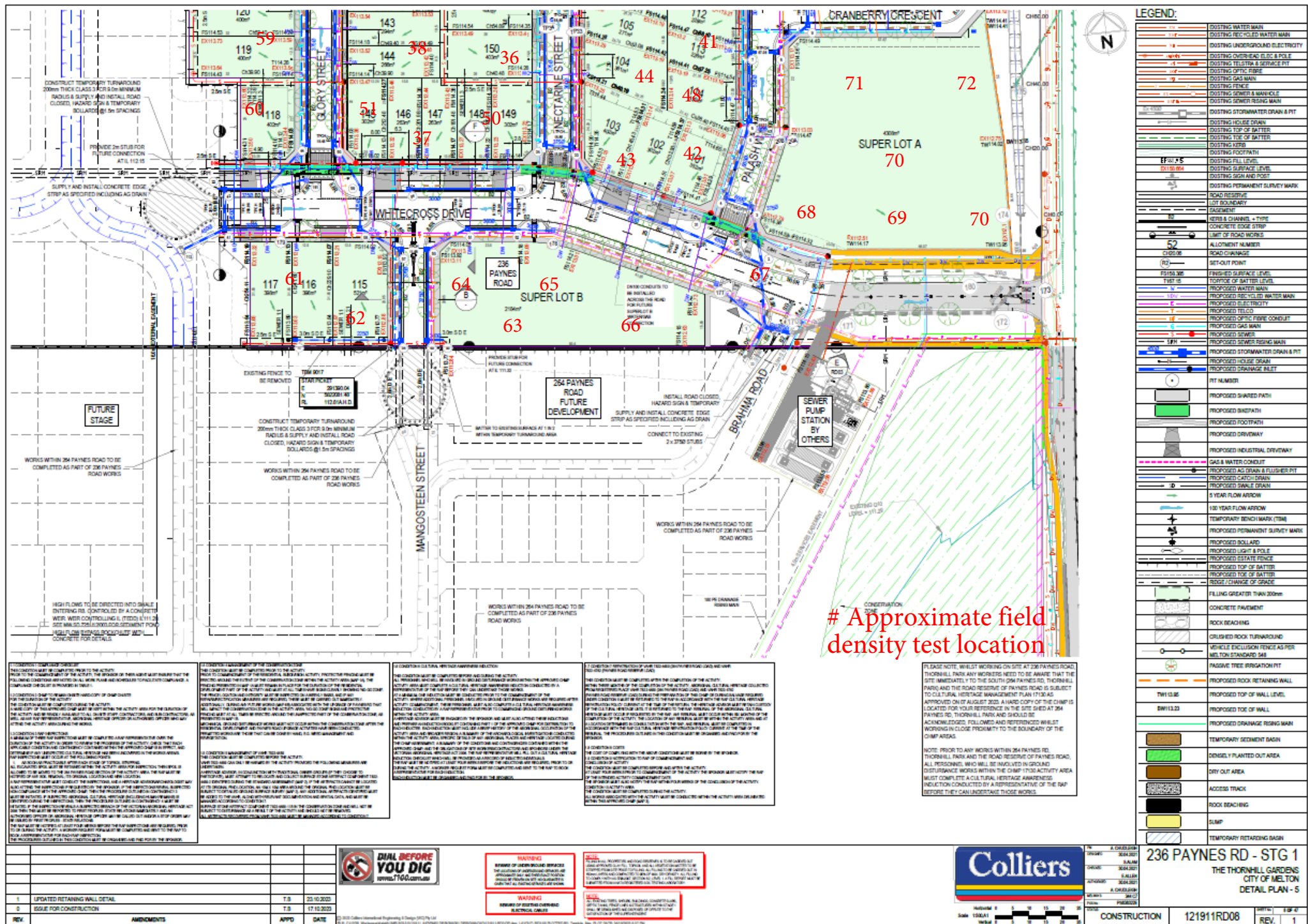




FIGURE 1 (2 of 2)





## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R001  
Date Issued 10/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	07/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:29
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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>	2.05	2.06	2.04	2.06	1.95	1.96
Field moisture content %	26.3	26.1	28.4	19.9	21.2	21.1

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>	2.10	2.09	2.05	2.06	1.99	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	29.0	28.0	30.5	22.5	23.5	21.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.0% dry	0.0%
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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	99.5	100.0	98.0	98.5
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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 23628  
Report No 23628/R002  
Date Issued 21/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	08/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 00:00
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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	175
Field wet density t/m <sup>3</sup>	1.77	1.75	1.78	1.88	1.86	1.77
Field moisture content %	18.9	17.0	19.5	20.8	21.4	20.6

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	1.79	1.79	1.78	1.91	1.89	1.79
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.5	19.5	22.0	23.5	23.5	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry
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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	100.0	98.0	98.5	98.5
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909  
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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R003  
Date Issued 14/08/23  
Tested by BS  
Date tested 09/08/23  
Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)  
Project NEW GARDENS NORTH - STAGE 1  
Location THORNHILL PARK

Feature EARTHWORKS Layer thickness 200 mm Time: 12:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	14	15	-	-	-
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>	1.85	1.84	1.89	-	-	-
Field moisture content %	19.1	21.9	22.5	-	-	-

Test procedure AS 1289.5.7.1

Test No	13	14	15	-	-	-
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>	1.86	1.86	1.95	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.5	22.0	24.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	0.0%	2.0% dry	-	-	-
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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	96.5	-	-	-
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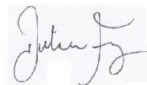
Material description

No 13 - 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 23628  
Report No 23628/R004  
Date Issued 21/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 1	Date tested	10/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:43
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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>	1.92	1.93	1.93	1.99	2.01	2.02
Field moisture content %	31.4	31.8	31.4	25.2	27.1	28.5

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>	1.95	1.97	1.96	2.04	2.06	2.06
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	31.5	34.0	33.5	27.5	29.5	30.5

Moisture Variation From Optimum Moisture Content	0.0%	2.0% dry	2.0% dry	2.0% dry	2.0% dry	2.0% dry
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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	98.0	97.5	98.5
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Material description

No 16 - 21 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909  
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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R005  
Date Issued 30/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	WS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	11/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:30
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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>	1.74	1.90	1.89	1.77	1.84	1.98
Field moisture content %	23.2	22.5	23.4	24.6	20.6	25.3

Test procedure AS 1289.5.7.1

Test No	22	23	24	25	26	27
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>	1.79	1.92	1.93	1.81	1.88	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	26.0	24.5	26.0	27.0	23.5	28.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry
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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	99.0	98.0	98.0	98.0	99.5
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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 23628  
Report No 23628/R006  
Date Issued 30/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	15/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:39
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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>	2.00	1.97	1.99	2.16	2.14	2.18
Field moisture content %	20.8	22.7	21.7	20.9	20.7	22.0

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>	2.00	1.99	1.99	2.17	2.19	2.19
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	23.0	25.5	24.0	23.0	23.5	24.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry
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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	100.5	99.5	98.0	99.5
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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

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R007  
Date Issued 30/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 1	Date tested	17/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:51
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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>	1.90	1.82	1.88	1.76	1.75	1.75
Field moisture content %	22.7	21.3	22.0	26.4	23.8	24.3

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>	1.91	1.85	1.93	1.83	1.77	1.81
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.5	23.5	25.0	28.0	26.0	26.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	1.5% dry	2.5% dry	2.0% dry
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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	98.0	96.0	99.5	97.0
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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 23628  
Report No 23628/R008  
Date Issued 30/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 1	Date tested	18/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:11
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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>	2.06	2.06	2.01	1.83	1.83	1.80
Field moisture content %	27.8	28.8	24.5	30.5	23.3	31.3

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>	2.09	2.08	2.02	1.86	1.83	1.86
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	30.0	31.5	27.0	33.5	26.0	33.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry
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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	100.0	98.0	99.5	97.0
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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 23628  
Report No 23628/R009  
Date Issued 30/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 1	Date tested	21/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
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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>	1.93	1.96	1.91	-	-	-
Field moisture content %	29.2	28.9	28.3	-	-	-

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>	1.97	1.99	1.96	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	31.0	31.5	31.0	-	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	2.5% dry	2.5% dry	-	-	-
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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	97.5	-	-	-
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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 23628  
Report No 23628/R010  
Date Issued 11/09/23  
Tested by BS  
Date tested 22/08/23  
Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)  
Project NEW GARDENS NORTH - STAGE 1  
Location THORNHILL PARK

Feature EARTHWORKS Layer thickness 200 mm Time: 14:04

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	49	50	51	-	-	-
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>	2.00	1.94	2.05	-	-	-
Field moisture content %	19.5	22.8	21.0	-	-	-

Test procedure AS 1289.5.7.1

Test No	49	50	51	-	-	-
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>	2.05	2.01	2.10	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	19.5	22.5	23.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.5% wet	2.0% dry	-	-	-
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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	97.0	97.5	-	-	-
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Material description

No 49 - 51 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

Job No 23628  
Report No 23628/R011  
Date Issued 30/08/23  
Tested by BS  
Date tested 24/08/23  
Checked by JHF

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)  
Project NEW GARDENS NORTH - STAGE 1  
Location THORNHILL PARK

Feature EARTHWORKS Layer thickness 200 mm Time: 14:01

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	52	53	54	55	56	57
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>	1.97	2.00	1.91	1.76	1.75	1.92
Field moisture content %	22.4	17.8	25.6	23.4	25.1	30.4

Test procedure AS 1289.5.7.1

Test No	52	53	54	55	56	57
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>	1.99	2.03	1.92	1.81	1.76	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	24.0	20.0	28.0	25.5	27.5	33.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.5% dry
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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	100.0	97.0	99.0	97.5
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Material description

No 52 - 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 23628  
Report No 23628/R012  
Date Issued 01/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	25/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:14
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	58	59	60	61	62	63
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>	1.79	1.89	1.80	2.03	1.78	1.96
Field moisture content %	27.3	28.7	32.1	25.0	27.8	27.9

Test procedure AS 1289.5.7.1

Test No	58	59	60	61	62	63
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>	1.83	1.93	1.83	2.03	1.84	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	30.0	31.5	34.5	27.5	30.5	30.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry
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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	97.5	98.0	100.0	97.0	99.5
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Material description

No 58 - 63 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R013  
Date Issued 11/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	28/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:53
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	64	65	66	-	-	-
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>	1.97	2.00	1.76	-	-	-
Field moisture content %	24.7	22.7	24.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	64	65	66	-	-	-
Compactive effort	Standard					
Override rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of override material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	2.03	1.98	1.78	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	27.0	25.0	27.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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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	101.5	99.0	-	-	-
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Material description

No 64 - 66 Clay Fill

AVRLOT HILF V1.10 MAR 13



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## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R014  
Date Issued 11/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEW GARDENS NORTH - STAGE 1	Date tested	29/08/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:17
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	67	68	69	-	-	-
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>	1.85	1.82	1.83	-	-	-
Field moisture content %	30.4	30.1	27.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	67	68	69	-	-	-
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>	1.83	1.79	1.84	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	33.0	33.0	29.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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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 ( $R_{HD}$ )	%	100.5	101.5	99.5	-	-	-
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Material description

No 67 - 69 Clay Fill

AVRLOT HILF V1.10 MAR 13



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## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R015  
Date Issued 13/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	07/09/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:50
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	70	71	72	-	-	-
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>	2.04	1.97	1.99	-	-	-
Field moisture content %	23.2	23.7	24.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	70	71	72	-	-	-
Compactive effort	Standard					
Override rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of override material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	2.07	1.96	1.99	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.0	26.5	27.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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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	100.5	100.0	-	-	-
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Material description

No 70 - 72 Clay Fill

AVRLOT HILF V1.10 MAR 13



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## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R016  
Date Issued 22/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	08/09/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:28
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	73	74	75	-	-	-
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>	1.91	1.97	1.91	-	-	-
Field moisture content %	21.4	22.4	20.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	73	74	75	-	-	-
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>	1.97	1.99	1.95	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	23.5	25.0	23.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	-	-	-
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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	98.5	98.5	-	-	-
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Material description

No 73 - 75 Clay Fill

AVRLOT HILF V1.10 MAR 13



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## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23628  
Report No 23628/R017  
Date Issued 22/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEW GARDENS NORTH - STAGE 1	Date tested	11/09/23
Location	THORNHILL PARK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	76	77	78	-	-	-
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	1.91	1.95	-	-	-
Field moisture content %	22.0	21.0	20.9	-	-	-

Test procedure AS 1289.5.7.1

Test No	76	77	78	-	-	-
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>	1.96	1.95	1.97	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	24.5	23.0	23.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	-	-	-
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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	97.5	99.0	-	-	-
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Material description

No 76 - 78 Clay Fill

AVRLOT HILF V1.10 MAR 13



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