



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

12<sup>th</sup> December 2023

Our Reference: 23320:NB1762

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING**  
**NEWBRIDGE – STAGE 14 (WALLAN)**

Please find attached our Report No's 23320/R001 to 23320/R022 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 commenced in April 2023 and was completed in August 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).

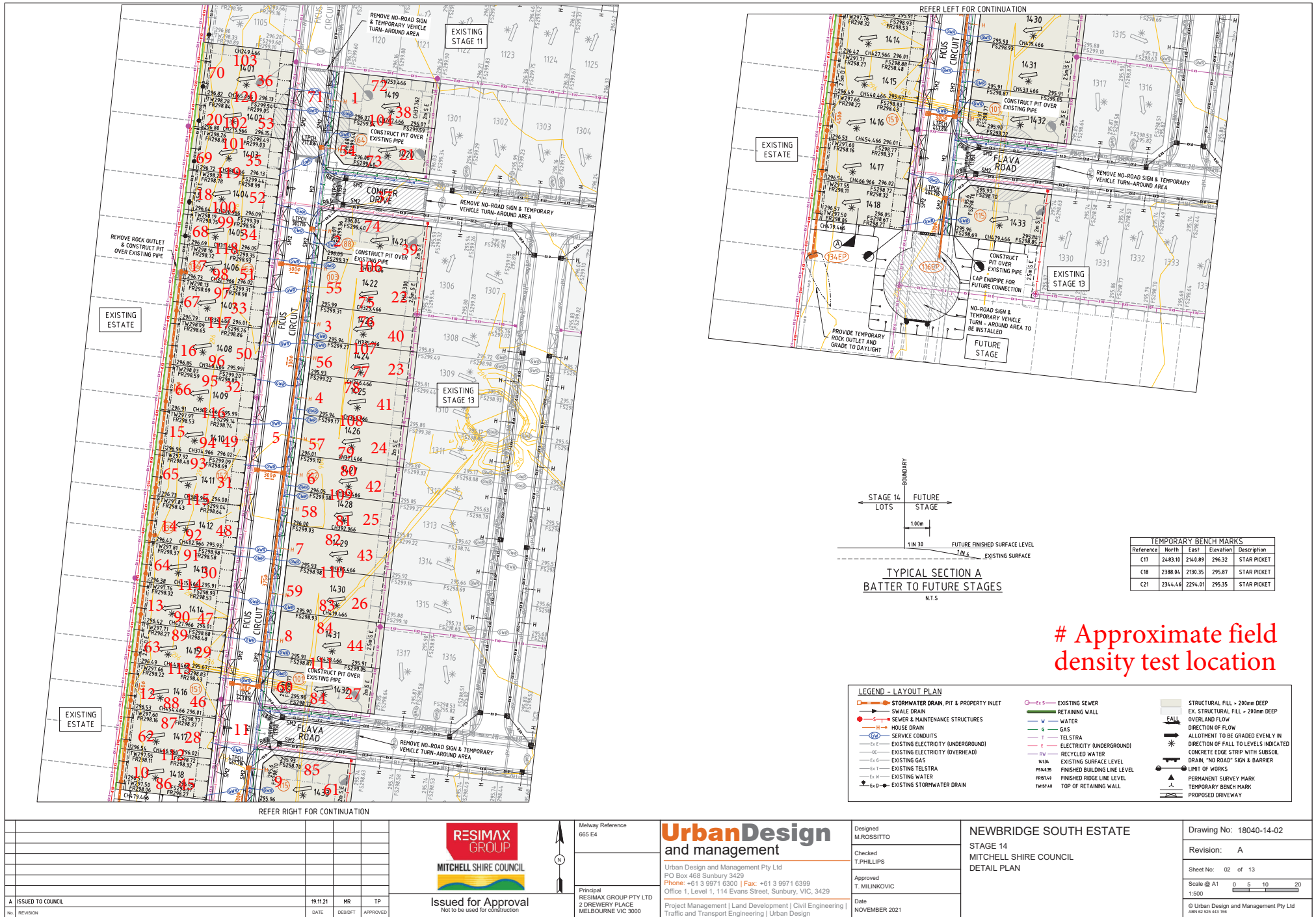
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

# FIGURE 1





# COMPACTION ASSESSMENT

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23320  
Report No 23320/R001  
Date Issued 22/06/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	17/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:25
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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>	1.91	1.90	1.90	1.91	1.90	1.90
Field moisture content %	19.4	19.9	20.2	19.3	22.1	21.9

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>	1.94	1.95	1.94	1.98	1.94	1.95
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	22.0	22.5	22.5	21.5	24.5	24.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% 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 ( $R_{HD}$ )	%	98.0	98.0	98.0	96.5	98.0	97.5
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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

*Justin Fry*

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)  
Project NEWBRIDGE - STAGE 14  
Location WALLAN

Job No 23320  
Report No 23320/R002  
Date Issued 19/06/23

Tested by AC  
Date tested 18/04/23  
Checked by JHF

Feature EARTHWORKS

Layer thickness 200 mm

Time: 08:29

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>	1.91	1.91	1.92	1.91	1.99	1.93
Field moisture content %	22.3	18.8	20.4	17.2	21.9	24.0

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>	1.98	1.97	1.99	1.96	2.01	2.00
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	24.0	21.0	23.0	20.0	24.5	24.0

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.5% dry	2.5% dry	2.5% 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 ( $R_{HD}$ )	%	96.5	97.0	96.5	97.5	99.0	96.5
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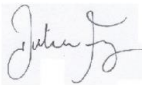
Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R003  
Date Issued 22/06/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	19/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:29
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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	175
Field wet density t/m <sup>3</sup>	1.92	1.90	1.90	1.93	1.91	1.93
Field moisture content %	21.0	18.6	18.9	19.3	18.7	21.7

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	1.98	1.94	1.96	1.99	1.98	2.03
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	23.5	20.5	21.5	21.5	21.0	24.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	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 ( $R_{HD}$ )	%	97.0	98.0	97.5	96.5	96.5	95.0
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Material description

No 13 - 18 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 23320  
Report No 23320/R004  
Date Issued 21/07/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	20/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:02
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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	175
Field wet density t/m <sup>3</sup>	1.95	1.99	1.92	1.92	1.91	1.94
Field moisture content %	18.7	24.4	18.8	21.5	16.4	17.5

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.05	2.06	1.99	1.99	2.00	2.03
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.0	26.5	21.0	24.0	18.5	19.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.5% 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 ( $R_{HD}$ )	%	95.0	97.0	96.5	96.5	95.5	95.5
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Material description

No 19 - 24 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

*Justin Fry*

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23320  
Report No 23320/R005  
Date Issued 21/07/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	21/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:02
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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	175
Field wet density t/m <sup>3</sup>	1.91	1.92	1.92	1.92	1.96	1.93
Field moisture content %	19.7	21.7	19.3	19.4	17.4	20.4

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	1.99	1.99	2.01	2.00	2.05	2.02
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.5	24.0	19.0	21.5	19.5	23.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	0.0%	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 ( $R_{HD}$ )	%	96.0	96.5	95.5	96.0	96.0	96.0
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Material description

No 25 - 30 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R006  
Date Issued 21/07/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	26/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:27
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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	175
Field wet density t/m <sup>3</sup>	1.92	1.91	1.92	1.94	1.92	1.93
Field moisture content %	16.8	17.5	18.7	17.4	19.0	20.6

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.00	1.97	1.99	2.00	2.00	2.00
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	19.0	19.5	18.5	19.5	21.5	23.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	0.0%	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 ( $R_{HD}$ )	%	96.0	96.5	96.5	97.0	96.0	96.5
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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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23320  
Report No 23320/R007  
Date Issued 09/05/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	NEWBRIDGE - STAGE 14	Date tested	04/05/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:46
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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	175
Field wet density t/m <sup>3</sup>	2.05	2.14	2.17	2.18	2.20	2.18
Field moisture content %	22.8	23.3	23.5	20.2	22.1	18.7

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.05	2.13	2.20	2.18	2.23	2.17
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.0	26.0	25.5	22.5	22.0	21.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	2.0% 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 ( $R_{HD}$ )	%	100.0	100.5	98.5	100.5	98.5	100.5
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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

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23320  
Report No 23320/R008  
Date Issued 31/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	22/05/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:32
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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	175
Field wet density t/m <sup>3</sup>	1.92	1.93	1.90	1.90	1.91	1.93
Field moisture content %	20.3	16.8	19.0	20.1	19.2	21.8

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.00	2.01	1.96	1.93	1.95	2.01
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	20.5	18.5	21.5	22.5	19.0	20.5

Moisture Variation From Optimum Moisture Content	0.0%	1.5% dry	2.5% dry	2.0% dry	0.0%	1.5% wet
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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 ( $R_{HD}$ )	%	95.5	96.0	97.0	98.0	97.5	96.0
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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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23320  
Report No 23320/R009  
Date Issued 07/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	30/05/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:32
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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>	1.93	1.91	1.90	1.90	1.89	1.91
Field moisture content %	25.8	22.2	25.9	27.7	24.0	23.6

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>	1.98	1.95	1.97	1.94	1.92	1.97
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	26.0	23.5	26.5	29.0	26.5	26.0

Moisture Variation From Optimum Moisture Content	0.0%	1.5% dry	0.5% dry	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 ( $R_{HD}$ )	%	97.5	98.0	97.0	98.0	98.5	96.5
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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 23320  
Report No 23320/R010  
Date Issued 27/07/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	07/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:32
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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 mm	175	175	175	175	175	175
Field wet density t/m <sup>3</sup>	1.93	1.91	1.93	1.93	1.92	1.91
Field moisture content %	21.6	25.2	25.5	20.9	19.4	25.2

Test procedure AS 1289.5.7.1

Test No	55	56	57	58	59	60
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	1.98	2.03	1.99	1.98	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	23.5	27.5	28.5	23.5	21.5	27.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% 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 ( $R_{HD}$ )	%	96.5	96.5	95.0	97.0	97.5	96.0
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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

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23320  
Report No 23320/R011  
Date Issued 07/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	09/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:33
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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	175
Field wet density t/m <sup>3</sup>	1.91	1.91	1.90	1.90	1.92	1.91
Field moisture content %	23.6	22.3	23.7	21.3	19.9	22.3

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	2.00	1.98	1.95	1.98	2.00	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	26.0	25.0	26.0	22.0	22.0	24.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	1.0% 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 ( $R_{HD}$ )	%	95.5	96.0	97.5	96.0	96.0	96.0
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Material description

No 61 - 66 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R012  
Date Issued 31/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	14/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:26
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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	175
Field wet density t/m <sup>3</sup>	1.91	1.90	1.91	1.90	1.90	1.90
Field moisture content %	17.1	17.3	17.1	17.3	19.1	18.5

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	1.96	1.95	1.96	1.94	1.91	1.94
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	19.5	19.5	19.5	20.0	22.0	18.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% 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 ( $R_{HD}$ )	%	97.0	97.5	97.5	98.5	99.5	98.5
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Material description

No 67 - 72 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 23320  
Report No 23320/R013  
Date Issued 31/07/2023

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	20/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:03
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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	175
Field wet density t/m <sup>3</sup>	1.89	1.89	1.93	1.92	1.92	1.91
Field moisture content %	24.5	23.3	27.5	21.5	23.5	27.1

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	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	1.99	1.96	1.97	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	27.0	25.5	27.5	21.5	23.5	27.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	0.0%	0.0%	0.0%	0.5% 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	97.0	97.5	97.5	96.5
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Material description

No 73 - 78 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R014  
Date Issued 31/07/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	26/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:34
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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	175
Field wet density t/m <sup>3</sup>	1.90	1.89	1.90	1.92	1.93	1.91
Field moisture content %	22.6	23.5	22.2	27.9	22.5	22.5

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	1.96	1.95	1.97	2.00	2.00	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.5	25.5	24.5	27.5	25.5	25.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	0.5% wet	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 ( $R_{HD}$ )	%	96.5	97.0	96.5	96.0	96.5	96.0
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Material description

No 79 - 84 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)  
Project NEWBRIDGE - STAGE 14  
Location WALLAN

Job No 23320  
Report No 23320/R015  
Date Issued 01/08/23

Tested by AC  
Date tested 30/06/23  
Checked by JHF

Feature EARTHWORKS Layer thickness 200 mm Time: 09:28

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	175
Field wet density t/m <sup>3</sup>	1.91	1.92	1.93	1.94	1.92	1.93
Field moisture content %	16.8	19.4	20.1	18.1	19.3	17.5

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m <sup>3</sup>	1.96	1.98	2.00	2.02	1.99	2.02
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	19.0	20.0	22.5	18.0	21.0	17.5

Moisture Variation From Optimum Moisture Content	2.5% dry	0.5% dry	2.5% dry	0.0%	1.5% 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 ( $R_{HD}$ )	%	97.5	97.0	96.5	96.0	96.5	95.5
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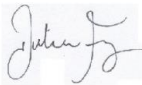
Material description

No 85 - 90 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R016  
Date Issued 15/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	10/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:29
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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 <sup>3</sup>	1.90	1.91	1.91	1.91	1.89	1.90
Field moisture content %	18.3	18.2	22.0	18.9	18.6	19.4

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 <sup>3</sup>	1.94	1.95	1.95	1.97	1.92	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	20.5	20.5	24.5	21.0	21.0	22.0

Moisture Variation From Optimum Moisture Content	2.5% 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 ( $R_{HD}$ )	%	97.5	98.0	98.0	97.0	98.5	96.0
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Material description

No 91 - 96 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 23320  
Report No 23320/R017  
Date Issued 31/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	12/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:52
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	97	98	99	100	101	102
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>	1.88	1.89	1.90	1.91	1.89	1.90
Field moisture content %	18.8	24.5	17.3	20.2	18.6	17.3

Test procedure AS 1289.5.7.1

Test No	97	98	99	100	101	102
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>	1.92	1.94	1.94	1.97	1.92	1.96
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.5	27.0	19.5	22.5	21.0	20.0

Moisture Variation From Optimum Moisture Content	2.5% 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 ( $R_{HD}$ )	%	98.0	97.5	98.0	96.5	98.5	97.0
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Material description

No 97 - 102 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 23320  
Report No 23320/R018  
Date Issued 31/08/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	18/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:26
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	103	104	105	106	107	108
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	1.91	1.90	1.92	1.92	1.92
Field moisture content %	25.7	22.8	18.9	26.1	16.8	17.3

Test procedure AS 1289.5.7.1

Test No	103	104	105	106	107	108
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	2.00	1.99	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	28.0	25.0	21.0	28.5	19.0	19.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% 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 ( $R_{HD}$ )	%	97.5	97.0	97.0	96.5	96.5	97.0
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Material description

No 103 - 108 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R019  
Date Issued 22/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	24/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:28
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	109	110	111	112	113	114
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>	1.91	1.90	1.91	1.93	1.92	1.90
Field moisture content %	23.0	19.4	22.6	21.5	19.4	23.4

Test procedure AS 1289.5.7.1

Test No	109	110	111	112	113	114
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	1.95	1.96	2.03	1.96	1.95
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.5	22.0	25.0	23.5	21.5	25.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% 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 ( $R_{HD}$ )	%	96.0	97.5	97.0	95.0	97.5	97.5
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Material description

No 109 - 114 Clay Fill

AVRLOT HILF V1.10 MAR 13



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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 23320  
Report No 23320/R020  
Date Issued 06/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 14	Date tested	02/08/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:33
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	115	116	117	118	119	120
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	1.77	1.90	1.92	1.91	1.90
Field moisture content %	22.6	21.1	25.6	21.6	22.4	22.2

Test procedure AS 1289.5.7.1

Test No	115	116	117	118	119	120
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>	2.01	1.86	1.96	2.00	2.00	1.96
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	25.0	21.5	28.5	21.0	22.5	24.5

Moisture Variation From Optimum Moisture Content	2.5% dry	0.5% wet	2.5% dry	0.5% wet	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 ( $R_{HD}$ )	%	95.5	95.5	97.5	96.0	95.5	97.0
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Material description

No 115 - 120 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry