



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

3rd May 2024

Our Reference: 23559:NB1853

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ASPIRE - STAGE 33 (PLUMPTON)

Please find attached our Report No's 23559/R001 to 23559/R009 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 September 2023 and was completed in December 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



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23559
Report No 23559/R001
Date Issued 26/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	18/09/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:32
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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 ³	1.88	1.88	1.90	1.90	1.91	1.91
Field moisture content %	20.4	18.4	19.2	21.5	20.1	22.4

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 ³	1.91	1.91	1.93	1.95	1.93	1.96
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	23.0	21.0	21.5	23.5	22.5	25.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% 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})	%	98.0	98.0	98.5	97.0	99.0	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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23559
Report No 23559/R002
Date Issued 27/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	19/09/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:19
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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 ³	1.86	1.86	1.87	-	-	-
Field moisture content %	17.7	19.1	16.8	-	-	-

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 ³	1.87	1.87	1.87	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	20.0	21.5	19.0	-	-	-

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})	%	99.5	99.5	99.5	-	-	-
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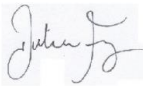
Material description

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 23559
Report No 23559/R003
Date Issued 27/09/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	21/09/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:29
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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 ³	2.04	2.04	2.05	2.04	2.07	2.08
Field moisture content %	21.5	16.3	18.4	21.8	20.8	19.7

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 ³	2.06	2.09	2.10	2.08	2.08	2.09
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	21.5	18.0	18.5	24.0	21.0	21.5

Moisture Variation From Optimum Moisture Content	0.0%	2.0% dry	0.0%	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})	%	99.0	97.5	97.5	98.0	99.5	99.0
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Material description

No 10 - 15 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 23559
Report No 23559/R004
Date Issued 08/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	01/11/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:33
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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 ³	2.14	2.14	2.11	2.12	2.03	2.15
Field moisture content %	22.9	22.2	23.6	22.9	22.0	21.5

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 ³	2.19	2.13	2.10	2.11	2.02	2.16
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	23.5	23.0	24.0	23.0	22.0	22.0

Moisture Variation From Optimum Moisture Content	0.5% dry	0.5% dry	0.0%	0.5% dry	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})	%	98.0	100.5	100.5	100.5	100.5	99.5
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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 23559
Report No 23559/R005
Date Issued 23/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	15/11/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:15
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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 ³	1.96	2.02	1.93	1.90	1.99	2.01
Field moisture content %	19.3	19.5	18.4	19.9	22.1	20.1

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 ³	1.99	2.09	1.96	1.99	2.07	2.07
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	21.5	21.5	21.0	22.0	23.5	22.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	1.5% 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	96.5	98.5	95.0	96.0	97.5
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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 23559
Report No 23559/R006
Date Issued 06/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	27/11/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:51
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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 ³	1.95	1.96	1.97	1.97	1.96	1.92
Field moisture content %	30.4	20.4	34.2	33.8	31.4	28.9

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 ³	1.98	1.96	1.99	1.99	1.99	1.95
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	31.5	23.0	36.5	33.5	31.5	31.5

Moisture Variation From Optimum Moisture Content	1.0% dry	2.5% dry	2.0% dry	0.0%	0.0%	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	99.5	99.0	99.0	98.5	98.5
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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

Justin Fry

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23559
Report No 23559/R007
Date Issued 04/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	28/11/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:29
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	34	35	36	-	-	-
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 ³	1.95	1.96	1.97	-	-	-
Field moisture content %	35.0	27.6	29.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	34	35	36	-	-	-
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 ³	1.98	1.99	1.99	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	34.5	30.5	32.5	-	-	-

Moisture Variation From Optimum Moisture Content	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})	%	98.5	98.0	99.0	-	-	-
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Material description

No 34 - 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 23559
Report No 23559/R008
Date Issued 04/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	29/11/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	37	38	39	-	-	-
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 ³	1.90	1.89	1.77	-	-	-
Field moisture content %	30.2	28.1	30.9	-	-	-

Test procedure AS 1289.5.7.1

Test No	37	38	39	-	-	-
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 ³	1.90	1.89	1.81	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	29.0	26.5	33.5	-	-	-

Moisture Variation From Optimum Moisture Content	1.0% wet	1.5% wet	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})	%	100.0	100.0	98.0	-	-	-
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Material description

No 37 - 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 23559
Report No 23559/R009
Date Issued 12/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	ASPIRE - STAGE 33	Date tested	04/12/23
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:47
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	40	41	42	-	-	-
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 ³	2.08	2.12	2.08	-	-	-
Field moisture content %	30.1	27.9	27.8	-	-	-

Test procedure AS 1289.5.7.1

Test No	40	41	42	-	-	-
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 ³	2.13	2.13	2.07	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	32.5	30.0	30.0	-	-	-

Moisture Variation From Optimum Moisture Content	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})	%	97.5	99.5	100.5	-	-	-
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Material description

No 40 - 42 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
Accredited for compliance with
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Approved Signatory : Justin Fry