



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

12th December 2023

Our Reference: 23321:NB1763

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
NEWBRIDGE – STAGE 15 (WALLAN)**

Please find attached our Report No's 23321/R001 to 23321/R020 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).

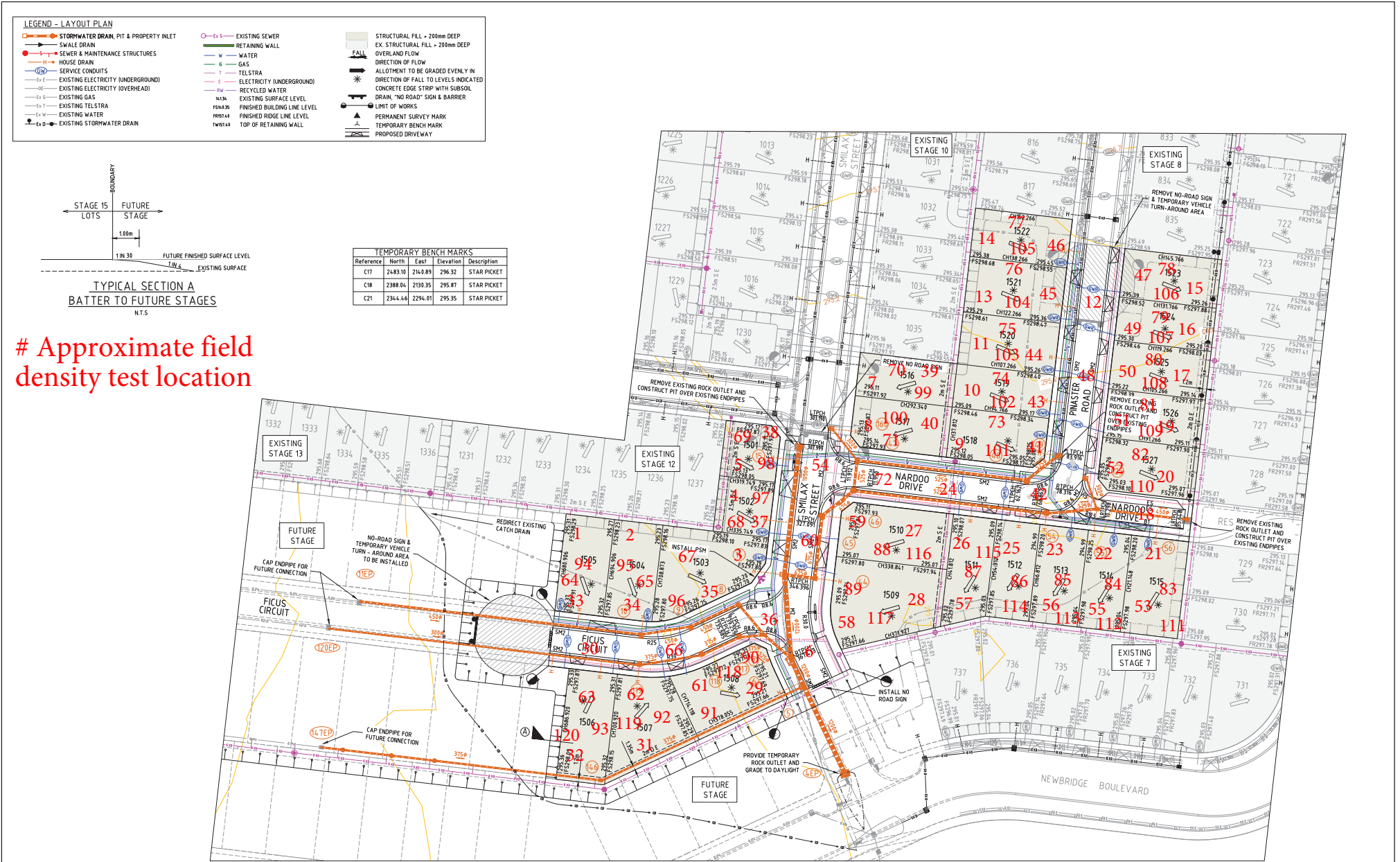
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



 Issued for Approval Not to be used for construction	Malway Reference 665 E4	 Urban Design and Management Pty Ltd PO Box 468 Sunbury 3429 Phone: +61 3 9971 6300 Fax: +61 3 9971 6399 Office 1, Level 1, 114 Evans Street, Sunbury, VIC, 3429 Project Management Land Development Civil Engineering Traffic and Transport Engineering Urban Design	Designed M.ROSSITTO Checked T.PHILLIPS Approved T. MILINKOVIC Date NOVEMBER 2021	NEWBRIDGE SOUTH ESTATE STAGE 15 MITCHELL SHIRE COUNCIL DETAIL PLAN	Drawing No: 18040-15-02
					A ISSUED TO COUNCIL No. REVISION

File name 18040-15-02.dwg layout name 02 file location L:\Work\Eng\18040 Newbridge Estate\Stage 15\Drawings



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R001
 Date Issued 22/06/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	13/04/23
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	1	2	3	4	5	6
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.91	1.91	1.94	1.94	1.93
Field moisture content	%	26.5	24.1	24.3	19.5	18.5

Test procedure AS 1289.5.7.1

Test No	1	2	3	4	5	6
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.93	1.92	1.94	1.95	1.94
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	29.0	26.5	27.0	19.5	21.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	0.0%	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	99.0	100.0	100.0	99.0	99.5
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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

Job No 23321
 Report No 23321/R002
 Date Issued 23/06/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	14/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:35
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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 ³	1.91	1.90	1.86	1.83	1.93	1.95
Field moisture content	%	25.1	25.2	23.9	29.1	25.9	24.4

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 ³	1.94	1.92	1.87	1.90	1.95	1.96
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	27.5	27.5	26.5	31.0	28.5	27.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	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})	%	99.0	99.0	99.5	96.0	99.0	99.0
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R003
 Date Issued 21/07/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	18/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:26
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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
Field wet density	t/m ³	1.90	1.93	1.90	1.94	1.93
Field moisture content	%	17.2	18.1	22.2	17.3	17.6

Test procedure AS 1289.5.7.1

Test No	13	14	15	16	17	18
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.93	1.94	1.94	1.96	1.96
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	20.5	24.5	19.0	21.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.0% dry	0.0%	1.5% 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	100.0	97.5	99.0	98.5	98.0
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Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R004
 Date Issued 20/06/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	19/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:27
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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
Field wet density	t/m ³	1.94	1.94	1.93	1.92	1.93
Field moisture content	%	19.2	22.1	20.2	22.8	21.7

Test procedure AS 1289.5.7.1

Test No	19	20	21	22	23	24
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.97	1.96	1.90	1.90	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.5	24.5	22.5	23.0	24.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	0.0%	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})	%	98.0	99.0	101.5	101.5	99.0	98.0
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Material description

No 19 - 24 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R005
 Date Issued 21/07/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	21/04/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:54
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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
Field wet density	t/m ³	1.96	1.95	1.98	1.97	1.96
Field moisture content	%	21.4	23.9	23.3	24.2	20.5

Test procedure AS 1289.5.7.1

Test No	25	26	27	28	29	30
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.97	1.98	2.00	2.01	1.99
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.5	26.0	26.0	26.5	22.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% 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})	%	99.5	99.0	99.0	98.0	98.5	100.0
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Material description

No 25 - 30 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R006
 Date Issued 21/07/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	26/04/23
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	31	32	33	34	35	36
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.92	1.90	1.90	1.91	1.90
Field moisture content	%	19.7	18.7	20.4	22.7	23.6

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.98	1.94	1.91	1.98	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	20.5	23.0	25.0	26.0

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% 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	98.0	99.5	96.0	99.0	99.0
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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

Job No 23321
 Report No 23321/R007
 Date Issued 31/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	22/05/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:28
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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	
Field wet density	t/m ³	1.87	1.89	1.89	1.90	1.86	1.85
Field moisture content	%	16.8	21.1	20.5	17.8	20.5	20.3

Test procedure AS 1289.5.7.1

Test No	37	38	39	40	41	42	
Compactive effort	Standard						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m ³	1.92	1.95	1.93	1.95	1.92	1.86
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	19.0	23.0	23.0	20.0	23.0	23.0

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})	%	97.5	97.0	97.5	97.0	97.0	99.5
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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

Job No 23321
 Report No 23321/R008
 Date Issued 09/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	30/05/23
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	43	44	45	46	47	48
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.89	1.91	1.90	1.89	1.91
Field moisture content	%	24.9	21.6	22.4	23.7	21.6

Test procedure AS 1289.5.7.1

Test No	43	44	45	46	47	48
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.91	1.95	1.92	1.89	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	27.0	24.0	24.5	26.0	22.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	2.0% dry	0.5% 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	98.5	99.0	99.5	98.0	98.5
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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

Job No 23321
 Report No 23321/R009
 Date Issued 27/07/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	07/06/23
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	49	50	51	52	53	54
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.94	1.94	1.96	1.95	1.94
Field moisture content	%	20.4	20.4	19.3	24.0	21.0

Test procedure AS 1289.5.7.1

Test No	49	50	51	52	53	54
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.96	1.96	1.96	1.96	1.93
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	23.0	21.5	26.0	23.5

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})	%	99.0	98.5	99.5	99.5	100.0	99.5
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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

Job No 23321
 Report No 23321/R010
 Date Issued 15/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	09/06/23
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	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
Field wet density	t/m ³	1.95	1.95	1.93	1.92	1.94
Field moisture content	%	26.1	26.0	26.6	25.5	28.3

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.98	1.98	1.92	1.93	2.01
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	26.0	28.5	27.5	28.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	1.5% dry	2.0% dry	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})	%	99.0	98.5	100.5	99.5	96.5	99.0
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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

Job No 23321
 Report No 23321/R011
 Date Issued 31/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	14/06/23
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
Field wet density	t/m ³	1.90	1.90	1.91	1.89	1.91
Field moisture content	%	16.3	19.3	17.6	16.8	17.3

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.93	1.93	1.98	1.91	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.5	21.5	20.0	16.5	20.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	0.0%	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	99.0	96.5	99.0	98.0	99.0
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Material description

No 61 - 66 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R012
 Date Issued 31/07/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	20/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:59
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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
Field wet density	t/m ³	1.95	1.93	1.94	1.96	1.93
Field moisture content	%	26.1	25.9	26.5	21.2	21.1

Test procedure AS 1289.5.7.1

Test No	67	68	69	70	71	72
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.96	1.92	1.96	1.97	1.92
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	28.5	28.0	29.5	22.0	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	0.5% 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})	%	99.5	100.5	99.0	99.5	100.0	98.0
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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

Job No 23321
 Report No 23321/R013
 Date Issued 31/07/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	26/06/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:25
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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
Field wet density	t/m ³	1.94	1.93	1.95	1.95	1.94
Field moisture content	%	21.7	22.3	25.3	20.4	25.3

Test procedure AS 1289.5.7.1

Test No	73	74	75	76	77	78
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.98	1.95	1.99	1.96	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.5	25.0	26.0	22.5	28.0

Moisture Variation From Optimum Moisture Content	0.5% wet	2.5% dry	0.5% dry	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})	%	98.0	99.5	98.0	99.5	99.5	99.5
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Material description

No 73 - 78 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R014
 Date Issued 01/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	30/06/23
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	79	80	81	82	83	84
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.94	1.94	1.96	1.95	1.94
Field moisture content	%	16.2	17.1	21.7	21.2	20.0

Test procedure AS 1289.5.7.1

Test No	79	80	81	82	83	84
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.95	1.93	1.98	1.97	1.93
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.0	19.5	24.5	24.0	22.5

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})	%	99.5	100.5	99.0	99.0	100.0	98.0
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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

Job No 23321
 Report No 23321/R015
 Date Issued 15/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	10/07/23
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	85	86	87	88	89	90
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL						
Measurement depth	mm	175	175	175	175	175
Field wet density	t/m ³	1.90	1.90	1.90	1.91	1.92
Field moisture content	%	22.7	15.6	20.6	15.1	20.4

Test procedure AS 1289.5.7.1

Test No	85	86	87	88	89	90
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.91	1.89	1.93	1.95	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	25.0	17.5	23.0	17.0	23.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% 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	100.5	98.5	98.5	98.5	99.5
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Material description

No 85 - 90 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R016
 Date Issued 31/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	12/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:34
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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
Field wet density	t/m ³	1.91	1.90	1.90	1.90	1.89
Field moisture content	%	17.4	16.0	20.3	19.7	16.9

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.97	1.96	1.96	1.92	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	18.0	23.0	22.0	19.0

Moisture Variation From Optimum Moisture Content	2.0% 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})	%	96.5	97.0	97.0	98.5	99.0	98.0
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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

Job No 23321
 Report No 23321/R017
 Date Issued 31/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	18/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:36
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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
Field wet density	t/m ³	1.91	1.92	1.93	1.95	1.93
Field moisture content	%	26.7	26.3	27.4	24.3	26.7

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.89	1.92	1.94	1.96	1.94
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	29.0	29.0	30.0	26.5	29.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% 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})	%	101.0	99.5	99.0	99.0	99.5	99.5
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Material description

No 97 - 102 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R018
 Date Issued 06/09/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	24/07/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:36
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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
Field wet density	t/m ³	1.91	1.88	1.89	1.91	1.91
Field moisture content	%	19.0	18.6	21.8	20.8	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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.96	1.91	1.93	1.94	1.96
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.5	20.0	24.0	23.0	17.5

Moisture Variation From Optimum Moisture Content	0.5% wet	1.5% dry	2.0% dry	2.5% dry	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})	%	97.5	99.0	98.0	99.0	97.5	97.5
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Material description

No 103 - 108 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

Job No 23321
 Report No 23321/R019
 Date Issued 06/09/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	02/08/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:31
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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
Field wet density	t/m ³	1.94	1.93	1.92	1.92	1.93
Field moisture content	%	24.7	25.4	23.5	25.4	22.9

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.03	1.94	1.94	1.97	1.97
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	28.0	26.0	27.5	25.5

Moisture Variation From Optimum Moisture Content	0.5% wet	2.5% dry	2.0% dry	2.0% dry	2.5% dry	0.5% 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	99.5	99.0	97.5	98.0	98.5
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Material description

No 109 - 114 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 23321
 Report No 23321/R020
 Date Issued 31/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 15	Date tested	04/08/23
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:58
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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
Field wet density	t/m ³	1.92	1.95	1.94	1.92	1.93
Field moisture content	%	19.8	18.9	20.1	21.3	19.3

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.91	2.00	1.95	1.91	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	19.0	22.5	24.0	22.0

Moisture Variation From Optimum Moisture Content	2.0% dry	0.0%	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})	%	100.5	97.0	99.5	100.0	99.0	100.5
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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