



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

17th December 2021

Our Reference: 21061:NB1124

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
NEWBRIDGE – STAGE 5 (WALLAN)**

Please find attached our Report No's 21061/R001 to 21061/R015 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 March 2021 and was completed in May 2021.

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

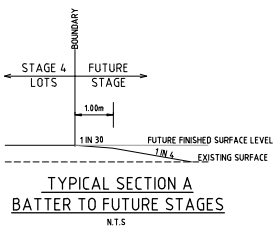
A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a faint circular stamp.

Nick Brock

FIGURE 1

LEGEND - LAYOUT PLAN

- STORMWATER DRAIN, PIT & PROPERTY INLET
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
- EXISTING GAS
- EXISTING TELSTRA
- EXISTING WATER
- EXISTING STORMWATER DRAIN
- EXISTING SEWER
- RETAINING WALL
- WATER
- GAS
- TELSTRA
- ELECTRICITY (UNDERGROUND)
- RECYCLED WATER
- M34 EXISTING SURFACE LEVEL
- FIN435 FINISHED BUILDING LINE LEVEL
- FR434 FINISHED RIDGE LINE LEVEL
- TW614 TOP OF RETAINING WALL
- EX STRUCTURAL FILL > 200mm DEEP
- OVERLAND FLOW
- DIRECTION OF FLOW
- ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FALL TO LEVELS INDICATED
- CONCRETE EDGE STRIP WITH SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
- LIMIT OF WORKS
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY



Approximate field density test location

No.	REVISION	DATE	DESIGN	APPROVED
A	ISSUED TO COUNCIL	27.11.20	AC	TP



Issued for Approval
Not to be used for construction

Melway Reference
655 E4

Principal
RESIMAX GROUP
2 DREWEY PLACE
MELBOURNE VIC 3000

UrbanDesign
and management

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 2020

NEWBRIDGE SOUTH ESTATE
STAGE 5
MITCHELL SHIRE COUNCIL
DETAIL PLAN

Drawing No: 18040-05-02

Revision: A

Sheet No: 02 of 04

Scale @ A1
1:500

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File name 18040-05-02.dwg layout name 02 file location L:\Work\Eng\18040 Newbridge Estate\Stage 5\Drawings



COMPACTION ASSESSMENT

Job No 21061
 Report No 21061/R001
 Date Issued 21/06/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	10/03/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:47
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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	2.13	2.19	2.09	1.99	2.05
Field moisture content	%	18.1	18.1	18.8	18.6	22.7

Test procedure AS 1289.5.7.1

Test No	1	2	3	4	5	6
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.17	2.21	2.15	2.06	2.07
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.0	20.0	21.5	18.0	25.0

Moisture Variation From Optimum Moisture Content	0.5% dry	2.0% dry	2.5% dry	0.5% wet	2.0% dry	2.0% dry
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Density Ratio (R _{HD})	%	98.0	99.0	97.5	97.0	99.5	99.0
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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 21061
 Report No 21061/R002
 Date Issued 10/04/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	15/03/21
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		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	1.93	1.94	1.93	1.92	1.94	1.95
Field moisture content	%	24.9	26.0	23.8	25.9	25.2	24.8

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	1.93	1.94	1.92	1.94	1.93	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	25.5	26.0	25.5	26.5	25.5	23.5

Moisture Variation From Optimum Moisture Content	0.5% dry	0.0%	1.5% dry	0.5% dry	0.0%	1.5% wet
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Density Ratio (R _{HD})	%	100.5	100.0	100.5	99.0	101.0	100.0
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21061
 Report No 21061/R003
 Date Issued 22/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	16/03/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:33
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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	1.95	1.94	1.94	1.92	1.93
Field moisture content	%	19.9	23.3	25.7	22.1	20.3

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	1.93	1.95	1.94	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	25.5	28.5	24.5	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 Ratio (R _{HD})	%	101.0	100.0	100.0	99.5	99.0	99.0
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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 21061
 Report No 21061/R004
 Date Issued 11/05/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	17/03/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:22
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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	1.96	1.98	1.99	1.98	2.06	2.04
Field moisture content	%	22.3	25.2	25.6	27.8	27.0	27.0

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	2.00	2.01	2.01	2.01	2.10	2.07
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	22.0	24.0	25.0	28.0	26.5	26.5

Moisture Variation From Optimum Moisture Content	0.5% wet	1.0% wet	0.5% wet	0.0%	0.5% wet	0.5% wet
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Density Ratio (R _{HD})	%	98.0	98.5	99.0	98.5	98.0	98.5
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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 21061
 Report No 21061/R005
 Date Issued 09/06/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	18/03/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:33
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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 <i>mm</i>	175	175	175	175	175	175
Field wet density <i>t/m³</i>	2.02	2.02	1.99	1.97	1.99	2.02
Field moisture content <i>%</i>	21.8	21.4	20.1	20.1	20.8	20.6

Test procedure AS 1289.5.7.1

Test No	25	26	27	28	29	30
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material <i>wet</i>	0	0	0	0	0	0
Peak Converted Wet Density <i>t/m³</i>	2.03	2.04	2.06	2.01	2.05	2.07
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	24.0	24.5	23.0	22.5	23.5	23.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	99.5	99.0	96.5	98.5	97.5	97.5
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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 21061
 Report No 21061/R006
 Date Issued 11/05/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEWBRIDGE - STAGE 5	Date tested	08/04/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:47
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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	2.04	2.00	2.03	1.97	2.00
Field moisture content	%	16.6	14.0	16.9	18.7	18.5

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	2.05	2.00	2.04	2.03	2.04
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.5	16.5	19.5	19.0	19.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	0.0%	0.0%	0.0%
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Density Ratio (R _{HD})	%	99.5	100.5	99.5	97.0	97.5	98.5
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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

Job No 21061
 Report No 21061/R007
 Date Issued 21/06/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	NEWBRIDGE - STAGE 5	Date tested	12/04/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:46
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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
Field wet density	t/m ³	2.12	2.13	2.11	2.07	2.02
Field moisture content	%	23.4	24.7	23.0	25.3	23.7

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.17	2.15	2.15	2.10	2.09
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.0	25.0	23.5	25.5	23.5

Moisture Variation From Optimum Moisture Content	0.5% wet	0.0%	0.5% dry	0.0%	0.0%	0.5% wet
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Density Ratio (R _{HD})	%	98.0	99.0	98.5	99.0	97.0	96.0
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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 21061
 Report No 21061/R008
 Date Issued 22/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	22/04/21
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	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	1.97	2.04	2.02	2.02	1.93
Field moisture content	%	18.9	19.9	18.4	20.0	21.4

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	2.00	2.09	2.08	2.08	1.97
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.5	22.5	21.0	22.0	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.0% dry
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Density Ratio (R _{HD})	%	98.5	97.5	97.0	97.5	98.0	96.5
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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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21061
Report No 21061/R009
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	23/04/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:32
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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	
Field wet density	t/m ³	2.04	1.96	1.99	2.01	2.05	2.06
Field moisture content	%	21.8	24.0	22.2	23.8	22.4	24.9

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	2.07	2.02	2.02	2.03	2.08	2.10
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	23.5	24.0	24.5	25.0	24.0	27.0

Moisture Variation From Optimum Moisture Content	1.5% dry	0.0%	2.5% dry	1.5% dry	1.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	98.5	97.0	98.5	98.5	99.0	98.0
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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 21061
Report No 21061/R010
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	26/04/21
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	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	1.96	1.86	1.91	1.96	1.93
Field moisture content	%	19.0	20.1	20.1	18.4	20.8

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	1.99	1.89	1.95	2.00	2.01
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.5	22.0	21.0	20.5	22.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	1.0% dry	2.0% dry	1.5% dry	2.5% dry
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Density Ratio (R _{HD})	%	99.0	98.5	98.0	98.0	96.0	98.5
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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 21061
 Report No 21061/R011
 Date Issued 22/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	13/05/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:26
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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	1.97	1.98	1.96	1.96	2.10	2.07
Field moisture content	%	16.5	22.5	21.0	23.4	23.9	22.2

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	2.00	2.00	2.01	2.01	2.13	2.11
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	17.0	22.5	22.5	25.0	26.5	22.5

Moisture Variation From Optimum Moisture Content	0.5% dry	0.0%	1.5% dry	1.5% dry	2.0% dry	0.5% dry
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Density Ratio (R _{HD})	%	99.0	98.5	98.0	97.5	98.5	98.0
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Material description

No 61 - 66 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 21061
 Report No 21061/R012
 Date Issued 22/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	14/05/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:36
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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	2.11	2.07	1.96	1.96	1.95
Field moisture content	%	19.7	20.0	17.1	17.9	22.1

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	2.13	2.12	1.99	2.01	2.00
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	20.5	22.0	17.5	19.5	22.0

Moisture Variation From Optimum Moisture Content	1.0% dry	2.0% dry	0.5% dry	1.5% dry	0.0%	2.0% dry
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Density Ratio (R _{HD})	%	99.0	98.0	98.5	97.5	97.5	97.0
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Material description

No 67 - 72 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 21061
Report No 21061/R013
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	17/05/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:05
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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	1.84	1.88	1.85	1.84	1.84
Field moisture content	%	18.7	21.7	18.9	20.4	20.2

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	1.88	1.88	1.87	1.90	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.0	21.5	18.5	20.5	20.0

Moisture Variation From Optimum Moisture Content	0.5% wet	0.5% wet	0.5% wet	0.0%	0.0%	1.0% wet
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Density Ratio (R _{HD})	%	97.5	99.5	98.5	97.0	96.5	100.0
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Material description

No 73 - 78 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 21061
 Report No 21061/R014
 Date Issued 22/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	18/05/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:58
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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	1.86	1.85	1.86	1.83	1.81
Field moisture content	%	23.8	18.4	23.4	22.3	23.7

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	1.91	1.90	1.90	1.92	1.89
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	18.5	23.5	22.5	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	0.0%	0.0%	0.5% dry	0.5% wet	2.5% wet
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Density Ratio (R _{HD})	%	97.0	97.0	98.0	95.0	96.0	96.5
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Material description

No 79 - 84 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 21061
Report No 21061/R015
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	NEWBRIDGE - STAGE 5	Date tested	19/05/21
Location	WALLAN	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:04
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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	1.88	1.89	1.95	1.97	1.94	1.92
Field moisture content	%	21.0	22.2	25.0	22.1	23.5	18.5

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	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m ³	1.91	1.97	2.03	1.98	2.00	1.89
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	18.5	19.5	25.0	20.0	23.0	16.5

Moisture Variation From Optimum Moisture Content	2.5% wet	2.5% wet	0.0%	2.0% wet	0.5% wet	2.0% wet
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Density Ratio (R _{HD})	%	98.5	96.0	96.0	99.5	97.0	101.5
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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