



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

19th July 2024

Our Reference: 23742:NB1877 (Rev.1)

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
WOODSONG – STAGE 1 (MICKLEHAM)

Please find attached our Report No's 23742/R001 and 23048/R001 to 23048/R004 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 October 2023 and was completed in February 2024.

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).

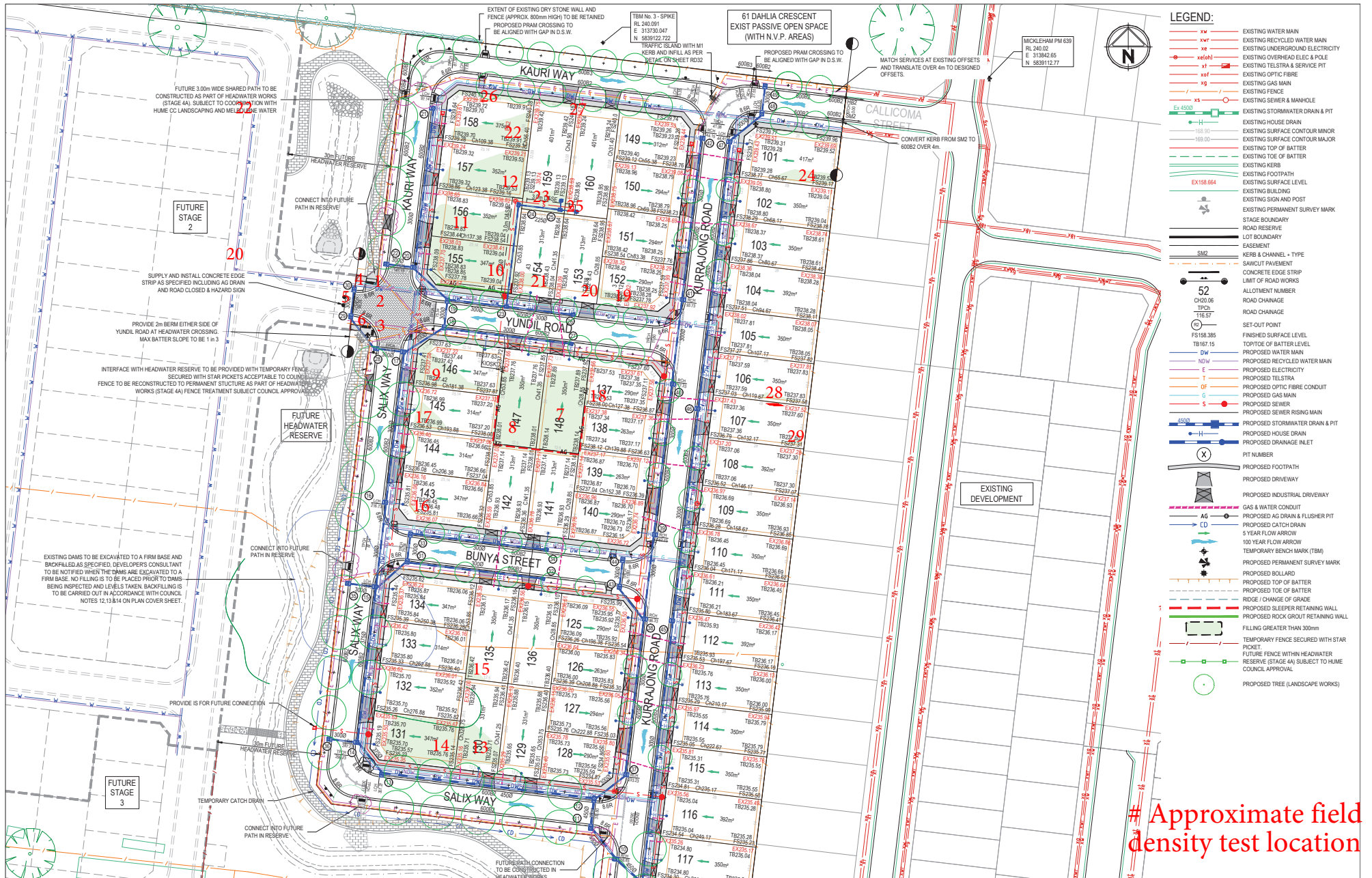
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1 (1 of 2)



Approximate field density test location

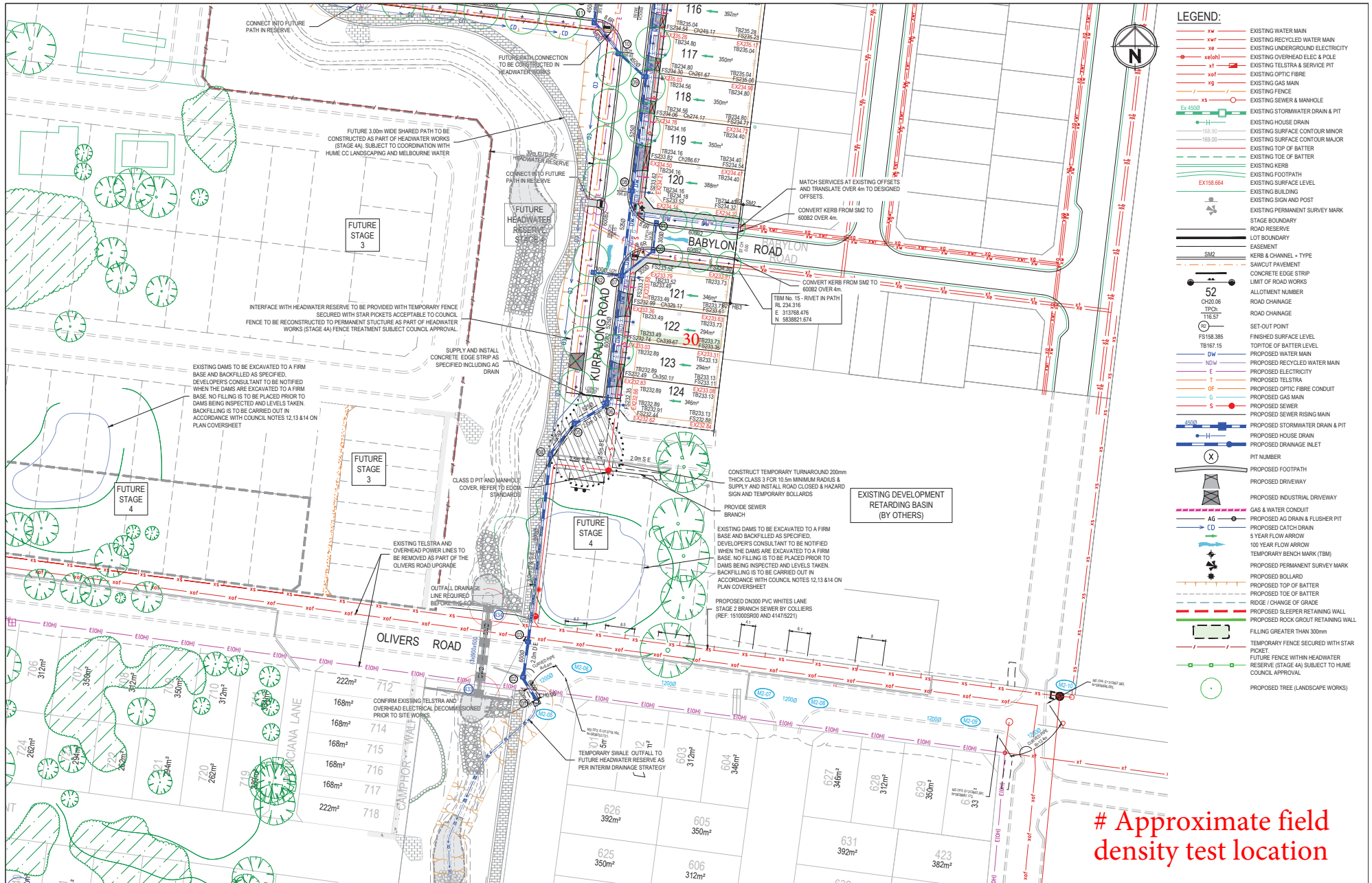
REV.	AMENDMENTS	APPROVED BY	DATE
2	INDUSTRIAL DRIVEWAY ADDED FOR HEADWATER RESERVE ACCESS ADJACENT TO LOT 156	N. MIRATANA	08.04.2024
1	AMENDED PRAM CROSSING	N. MIRATANA	15.01.2024
0	CONSTRUCTION ISSUE	N. MIRATANA	20.12.2023

WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE
AND THEIR EXACT POSITION SHOULD BE PROVEN ON
SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING
SERVICES ARE SHOWN. SPECIAL CONSIDERATION
SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES
UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



PREPARED BY: N. MIRATANA DESIGNED BY: N. MIRATANA CHECKED BY: N. MIRATANA AUTHORIZED BY: N. MIRATANA DRAWN BY: N. MIRATANA SCALE: AS SHOWN DATE: 08.04.2024	WOODSONG ESTATE STAGE 1 HUME CITY COUNCIL DETAIL PLAN - 1	SHEET NO. 4 OF 25 REV. 2
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FIGURE 1 (2 of 2)



Approximate field density test location

REV.	AMENDMENTS	APPROVED BY	DATE
2	INDUSTRIAL DRIVEWAY ADDED FOR HEADWATER RESERVE ACCESS ADJACENT TO LOT 156	N. MIRATANA	08.04.2024
1	AMENDED PRAM CROSSING	N. MIRATANA	15.01.2024
0	CONSTRUCTION ISSUE	N. MIRATANA	20.12.2023

WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
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AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



PRELIMINARY	151000-01RD05	SHEET NO. 5 OF 20
REV.	2	



COMPACTION ASSESSMENT

Job No 23742
 Report No 23742/R001
 Date Issued 15/11/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	WOODSONG - STAGE 1 ROAD RESERVE	Date tested	25/10/23
Location	MICKLEHAM	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:02
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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	1.89	1.89	1.85	1.90	1.93	1.96
Field moisture content	%	19.7	18.2	20.1	20.7	19.6	21.4

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	1.93	1.92	1.86	1.94	1.96	2.00
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	22.0	20.5	21.0	23.0	21.5	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	1.0% dry	2.0% dry	1.5% 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	98.5	99.5	98.0	99.0	98.0
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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 23048
 Report No 23048/R001
 Date Issued 13/11/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	WOODSONG - STAGE 1	Date tested	31/10/23
Location	MICKLEHAM	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:15
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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	1.85	1.88	1.85	1.86	1.83	1.85
Field moisture content	%	22.8	25.9	24.4	21.0	24.6	27.7

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	1.83	1.96	1.90	1.96	1.84	1.86
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	25.0	27.5	24.0	22.0	23.5	27.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	0.5% wet	1.0% dry	1.5% wet	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})	%	101.0	95.5	97.0	95.0	99.5	100.0
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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 23048
 Report No 23048/R002
 Date Issued 05/12/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	WOODSONG - STAGE 1	Date tested	29/11/23
Location	MICKLEHAM	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:20
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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	1.84	1.96	1.87	1.85	1.88
Field moisture content	%	22.2	27.4	21.4	26.7	21.4

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	1.88	1.96	1.97	1.91	1.92
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	26.5	22.5	28.0	23.5

Moisture Variation From Optimum Moisture Content	2.0% dry	0.5% wet	1.0% dry	1.5% dry	2.0% dry	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})	%	97.5	100.0	95.0	97.0	98.0	96.5
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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 23048
 Report No 23048/R003
 Date Issued 22/02/24

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	WOODSONG - STAGE 1	Date tested	09/02/24
Location	MICKLEHAM	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:52
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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	1.86	1.86	1.84	1.83	1.85
Field moisture content	%	23.2	27.8	26.3	22.9	24.0

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	1.88	1.86	1.90	1.89	1.86
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	25.5	26.0	25.0	25.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.5% wet	0.0%	2.0% dry	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})	%	99.0	100.0	96.5	96.5	99.0	95.5
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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 23048
 Report No 23048/R004
 Date Issued 06/03/24

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	WOODSONG - STAGE 1	Date tested	26/02/24
Location	MICKLEHAM	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:53
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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	1.83	1.87	1.84	1.90	1.85	1.87
Field moisture content	%	22.1	23.4	25.5	20.5	23.1	26.3

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	1.89	1.96	1.91	1.94	1.84	1.88
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	24.0	25.5	27.5	22.0	25.0	25.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.0% dry	1.5% dry	2.0% dry	1.0% 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})	%	97.0	95.5	96.5	98.0	100.5	99.0
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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