



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

4th October 2023

Our Reference: 23258:NB1697

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
SEVENTH BEND – STAGE 10 (MELTON SOUTH)**

Please find attached our Report No's 23258/R001 to 23258/R006 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 March 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).

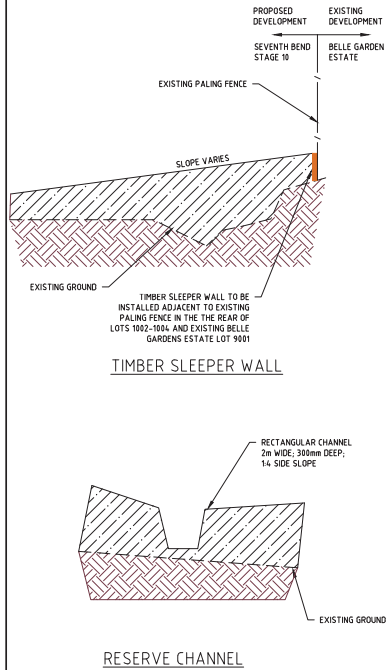
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

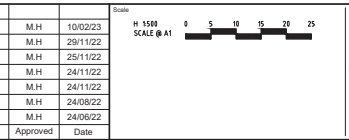
FIGURE 1



WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY 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.

Approximate field density test location

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	M.H.	10/02/23
F	TIMBER SLEEPER WALL DETAIL AND NOTES UPDATED	M.H.	29/11/22
E	BATTER AND FILL HATCH AMENDED IN REAR OF EX. LOT 9001	M.H.	25/11/22
D	REMOVE EASTERN RETAINING WALL REAR OF LOT 1004	M.H.	24/11/22
C	SWD & PITS AMENDED, SLEEPER WALL & BATTER ADDED, NOTES AMENDED	M.H.	24/11/22
B	ADDED FENCE ALONG THE RESERVE	M.H.	24/08/22
A	ISSUED FOR APPROVAL	M.H.	24/06/22



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SEVENTH BEND
Designed: O.TRAORE
Authorised: M.HOLMES
Checked: J.KOEHLER
Date: JUNE 2022

SEVENTH BEND STAGE 10 ROAD AND DRAINAGE FACE PLAN
MELTON CITY COUNCIL
EXFORD ROAD MANAGEMENT PTY LTD
CONSTRUCTION 308941CR200



COMPACTION ASSESSMENT

Job No 23258
 Report No 23258/R001
 Date Issued 24/03/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	SEVENTH BEND - STAGE 10	Date tested	21/03/23
Location	MELTON SOUTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:30
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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	1.98	2.01	2.00	2.01	2.00
Field moisture content	%	19.6	18.7	18.2	17.3	18.8

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	2.03	2.03	2.02	2.04	2.05
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	21.0	20.5	19.5	21.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.0% dry	2.5% dry	1.0% 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	99.0	99.5	98.5	98.0	98.5
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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 23258
 Report No 23258/R002
 Date Issued 28/03/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	SEVENTH BEND - STAGE 10	Date tested	22/03/23
Location	MELTON SOUTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:30
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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
Field wet density	t/m ³	2.02	2.08	2.02	1.99	1.97
Field moisture content	%	22.5	21.6	20.2	21.4	22.0

Test procedure AS 1289.5.7.1

Test No	7	8	9	10	11	12
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	2.03	2.10	2.05	2.02	1.98
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	25.0	24.0	23.0	24.0	24.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	99.0	99.0	98.5	98.5	99.5	98.0
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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 23258
 Report No 23258/R003
 Date Issued 03/04/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	SEVENTH BEND - STAGE 10	Date tested	27/03/23
Location	MELTON SOUTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:04
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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	1.98	1.98	1.96	1.96	1.95
Field moisture content	%	20.6	20.7	23.8	27.4	23.2

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	2.00	1.98	1.97	1.98	2.00
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.0	23.0	26.0	30.0	25.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% 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})	%	99.0	99.5	99.5	99.0	98.0	97.5
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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 23258
 Report No 23258/R004
 Date Issued 31/05/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	SEVENTH BEND - STAGE 10	Date tested	17/05/23
Location	MELTON SOUTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	12:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		19	20	21	-	-	-
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	2.02	2.00	2.04	-	-	-
Field moisture content	%	22.9	21.9	22.3	-	-	-

Test procedure AS 1289.5.7.1

Test No		19	20	21	-	-	-
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	2.05	2.05	2.05	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	24.5	24.5	24.5	-	-	-

Moisture Variation From Optimum Moisture Content		1.5% dry	2.0% dry	2.0% dry	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	97.5	99.5	-	-	-
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Material description

No 19 - 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

Job No 23258
 Report No 23258/R005
 Date Issued 29/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	SEVENTH BEND - STAGE 10	Date tested	02/08/23
Location	MELTON SOUTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:20
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	22	23	24	-	-	-
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	1.81	1.82	1.80	-	-
Field moisture content	%	19.6	20.3	24.6	-	-

Test procedure AS 1289.5.7.1

Test No	22	23	24	-	-	-
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	1.84	1.86	1.85	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	22.5	27.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	97.5	97.5	-	-
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Material description

No 22 - 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 23258
 Report No 23258/R006
 Date Issued 30/08/23

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	SEVENTH BEND - STAGE 10	Date tested	07/08/23
Location	MELTON SOUTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:45
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	25	26	27	-	-	-
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	1.78	1.77	1.80	-	-
Field moisture content	%	20.4	18.7	21.7	-	-

Test procedure AS 1289.5.7.1

Test No	25	26	27	-	-	-
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	1.80	1.81	1.83	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.0	21.0	24.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R _{HD})	%	98.5	97.5	98.5	-	-
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Material description

No 25 - 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