



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

6<sup>th</sup> November 2023

Our Reference: 23843:NB1731

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING**  
**105 SMITHS LANE – STAGE 40 (CLYDE NORTH)**

Please find attached our Report No's 23843/R001 to 23843/R005 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 was performed in September 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

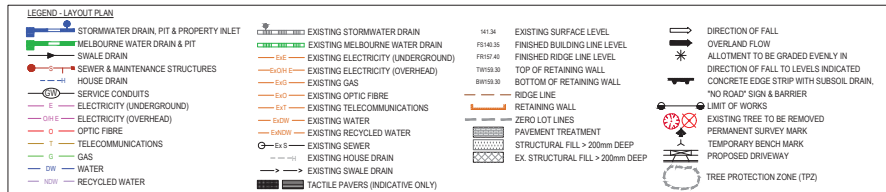
A handwritten signature in blue ink, appearing to be 'Nick Brock', is written over a light blue circular stamp.

Nick Brock

# FIGURE 1



FOR CONTINUATION SEE SHEET 1101438-40-011



ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)			VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NORTH/WEST	SOUTH/EAST
CLARA DRIVE	24.00	6.40 (10.30)	7.30 (11.20)	7.60 (11.50)	8.50 (6.55)	7.90 (5.95)
	23.20	6.40 (10.30)	7.30 (11.20)	7.60 (11.50)	7.70 (5.75)	7.90 (5.95)
	21.70	6.40 (10.30)	7.30 (11.20)	7.60 (11.50)	7.70 (5.75)	6.40 (4.45)
WEBSTER STREET	16.00	6.40	7.60	7.60	4.05	4.35
GIPPSLAND AVENUE	16.00	6.40	7.60	7.60	4.35	4.35
KOALAS CIRCUIT	14.50	6.40	7.60	7.60	2.54 (3.35)	4.35 (2.55)
KOALAS CIRCUIT (EXTENDED DRIVEWAY)	12.00	2.90		3.50	4.00	4.50

NOTE: DIMENSIONS IN PARENTHESIS INCLUDE PARKING LANE

Location	Gas		ND - Water		Water		Electricity		Telecommunication		Sewer		Irrigation	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
CLARA DRIVE	E	2,000.50	S	2,601.10	S	3,301.80	S	4,500.00	S	4,002.50	S	1.00	N	3.75
WEBSTER STREET	E	2.25	E	2.70	E	3.20	W	2.60	W	1.85	E	1.00	-	-
GIPPSLAND AVENUE	W	1.90	W	2.35	W	2.85	E	2.60	E	1.85	E	1.00	-	-
KOALAS CIRCUIT	SW	2.25	SW	2.70	SW	3.20	NE	1.25	NE	0.50	SW	1.00	-	-

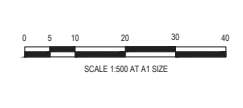
NOTE: STREET TREES ARE TO BE PLANTED IN THE CENTRE OF ALL NATURE STRIPS

**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
 The locations of underground services are approximate only and their exact position should be proven on site.  
 No guarantee is given that all existing services are shown.  
 Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
 www.1100.com.au

**FOR CONSTRUCTION**

# Approximate field density test location

REV	DESCRIPTION	DATE	DWN	APP	REV	DESCRIPTION	DATE	DWN	APP
E	RESERVE CROSSOVER RELOCATED & FEED CROSSING ADDED	20/07/23	LM	BY					
D	IRRIGATION MAIN IN CLARA DRIVE AMENDED	22/05/23	LM	BY					
C	DRAINAGE LINE K9.2 TO 40.10 & 40.03 TO 40.11 AMENDED	12/12/22	B.P.	LM					
B	RIDGE AMENDED IN LOTS 4031 - 4034	06/10/22	B.P.	LM					
A	ISSUED FOR CONSTRUCTION	23/05/23	B.P.	LM					



Designed: B. PAPPALARDO 04/10/2022  
 Drawn: M.F. JAURIGUE  
 Approved: L. MURRAY 23/05/2022  
 Date: 23/05/2022  
 P/S Number: P5906800R

**BW** Beveridge Williams  
 1 Glenferrie Road  
 Malvern VIC 3144  
 ph: 03 9524 8888  
 www.beveridgewilliams.com.au

Project Details  
**SMITHS LANE**  
**STAGE 40**  
**CITY OF CASEY, R5868**

Drawing Title  
**LAYOUT PLAN**  
**(SHEET 1 OF 2)**

Sheet 06 of 33  
 Scale: 1:500 @ A1  
 Project Ref: 1101438 40 010  
 Stage No: 40  
 Drawing No: 010  
 Rev: E

K:\Jobs Data\1101438\110 Smiths Lane, Casey (R5868)\_Eng\Stage 40\Drawings\1101438-40-010-LAY.dwg



# COMPACTION ASSESSMENT

Job No 23843  
 Report No 23843/R001  
 Date Issued 31/10/23

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	105 SMITHS LANE - STAGE 40	Date tested	04/09/23
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:00
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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 <sup>3</sup>	2.04	1.98	2.04	1.96	2.08
Field moisture content	%	18.9	18.6	18.4	23.3	20.0

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 <sup>3</sup>	2.07	2.01	2.06	2.01	2.12
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	19.0	18.5	18.5	23.5	20.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.0%	0.0%	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 <sub>HD</sub> )	%	98.5	98.5	99.0	97.5	98.5	99.0
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Material description

No 1 - 6 Clay Fill
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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 23843  
 Report No 23843/R002  
 Date Issued 31/10/23

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	105 SMITHS LANE - STAGE 40	Date tested	05/09/23
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:15
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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
Field wet density	t/m <sup>3</sup>	2.03	1.89	1.96	2.03	1.89
Field moisture content	%	24.2	23.6	18.6	20.8	24.0

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 <sup>3</sup>	2.02	1.91	2.00	2.06	1.97
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	24.0	24.0	18.5	21.0	24.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.0%	0.0%	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 <sub>HD</sub> )	%	101.0	99.0	98.0	98.0	96.0	97.5
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Material description

No 7 - 12 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



# COMPACTION ASSESSMENT

Job No 23843  
 Report No 23843/R003  
 Date Issued 31/10/23

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	105 SMITHS LANE - STAGE 40	Date tested	06/09/23
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:23
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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 <sup>3</sup>	1.90	1.96	1.91	1.87	1.89
Field moisture content	%	23.5	25.2	25.1	25.7	25.5

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 <sup>3</sup>	1.92	2.00	2.01	1.93	1.98
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	23.5	25.0	25.5	26.5	26.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.5% dry	0.5% 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 <sub>HD</sub> )	%	99.0	98.5	95.5	97.0	95.5	98.0
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Material description

No 13 - 18 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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# COMPACTION ASSESSMENT

Job No 23843  
 Report No 23843/R004  
 Date Issued 31/10/23

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	105 SMITHS LANE - STAGE 40	Date tested	07/09/23
Location	CLYDE NORTH	Checked by	JHF

<b>Feature</b>	<b>EARTHWORKS</b>	<b>Layer thickness</b>	200 mm	<b>Time:</b> 13:38
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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 <sup>3</sup>	2.00	1.94	1.83	1.91	1.94
Field moisture content	%	26.9	21.4	23.6	21.5	25.1

### 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 <sup>3</sup>	2.01	2.01	1.89	1.93	1.97
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	27.0	21.5	23.5	22.0	24.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.5% dry	0.5% wet	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

<b>Density Ratio ( R<sub>HD</sub> )</b>	%	<b>99.5</b>	<b>96.0</b>	<b>97.0</b>	<b>98.5</b>	<b>98.5</b>	<b>99.0</b>
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### Material description

No 19 - 24 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



# COMPACTION ASSESSMENT

Job No 23843  
 Report No 23843/R005  
 Date Issued 31/10/23

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	105 SMITHS LANE - STAGE 40	Date tested	08/09/23
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:45
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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 <sup>3</sup>	1.91	1.81	1.80	-	-
Field moisture content	%	27.7	29.2	27.0	-	-

### 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 <sup>3</sup>	1.96	1.83	1.82	-	-
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	28.0	30.0	27.5	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.5% dry	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 <sub>HD</sub> )	%	97.0	98.5	98.5	-	-
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### Material description

No 25 - 27 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry