



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

20th November 2021

Our Reference: 21067:NB1105

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
SMITHS LANE – STAGE 12 (CLYDE NORTH)

Please find attached our Report No's 21067/R001 to 21067/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 February 2021 and was completed in March 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).

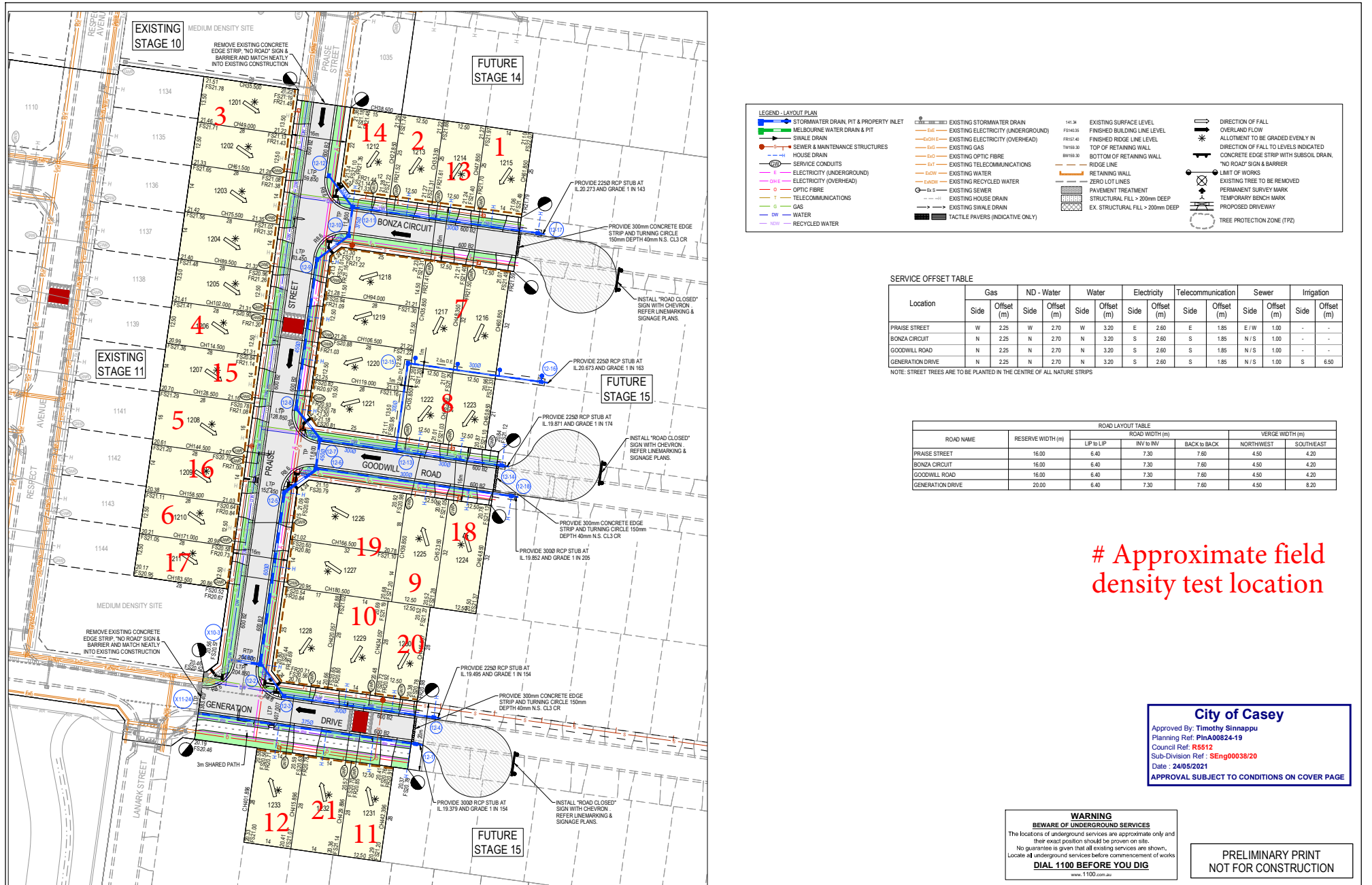
Please contact the undersigned if you require any additional information.

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



Approximate field density test location

City of Casey
 Approved By: Timothy Sinnappu
 Planning Ref: PInA00824-19
 Council Ref: R5512
 Sub-Division Ref: SEng00038/20
 Date: 24/05/2021
 APPROVAL SUBJECT TO CONDITIONS ON COVER PAGE

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

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P1 ISSUED FOR COMMENTS AND APPROVAL 15/12/20 NT: D.B.



0 5 10 20 30 40 50

Prepared By: L. MURRAY 10/12/2020
 Drawn: N. TABUENA
 Approved: D. BELTON 15/12/2020
 PS Number: PS83746W



Project: SMITHS LANE STAGE 12 CITY OF CASEY
 Drawing Title: LAYOUT PLAN

Sheet 04 of 15
 Scale: 1:500 @ A1
 Project Ref: 1101438 Stage No: 12 Drawing No: 010 Rev: P1



COMPACTION ASSESSMENT

Job No 21067
 Report No 21067/R001
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 12	Date tested	03/03/21
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 ³	2.02	2.02	2.02	2.03	2.01
Field moisture content	%	14.3	17.6	16.6	15.5	17.1

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	2.09	2.07	2.08	2.08	2.04
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	13.0	16.0	14.5	13.5	15.5

Moisture Variation From Optimum Moisture Content	1.5% wet	1.5% wet	2.0% wet	2.0% wet	2.0% wet	1.5% wet
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Density Ratio (R _{HD})	%	96.5	97.5	97.0	97.5	98.5	96.5
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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 21067
 Report No 21067/R002
 Date Issued 26/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 12	Date tested	04/03/21
Location	CLYDE NORTH	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	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	1.81	1.86	1.82	1.86	1.79
Field moisture content	%	17.1	16.5	17.1	18.5	18.3

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	1.90	1.86	1.89	1.87	1.84
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	17.0	16.5	17.0	17.0	18.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	1.5% wet	0.0%	0.0%
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Density Ratio (R _{HD})	%	95.5	100.0	96.5	99.5	97.0	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 21067
 Report No 21067/R003
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 12	Date tested	05/03/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:30
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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	1.89	1.86	1.87	1.87	1.87
Field moisture content	%	18.3	18.7	20.4	18.6	19.7

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	1.96	1.91	1.91	1.90	1.92
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	16.0	17.0	19.0	18.5	17.5

Moisture Variation From Optimum Moisture Content	2.0% wet	1.5% wet	1.5% wet	0.0%	2.5% wet	1.5% wet
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Density Ratio (R _{HD})	%	96.5	97.5	98.0	98.5	97.5	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 21067
 Report No 21067/R004
 Date Issued 13/08/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 12	Date tested	10/03/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:00
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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	2.00	2.01	1.99	-	-
Field moisture content	%	20.4	23.3	21.4	-	-

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	2.07	2.04	2.05	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.0	23.5	21.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	0.0%	0.0%	-	-	-
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Density Ratio (R _{HD})	%	96.5	98.5	97.0	-	-
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Material description

No 19 - 21 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry