



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

4th April 2023

Our Reference: 22208:NB1505

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OLIVINE – STAGE 24 (DONNYBROOK)

Please find attached our Report No's 22208/R001 to 22208/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 commenced in August 2022 and was completed in September 2022.

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).

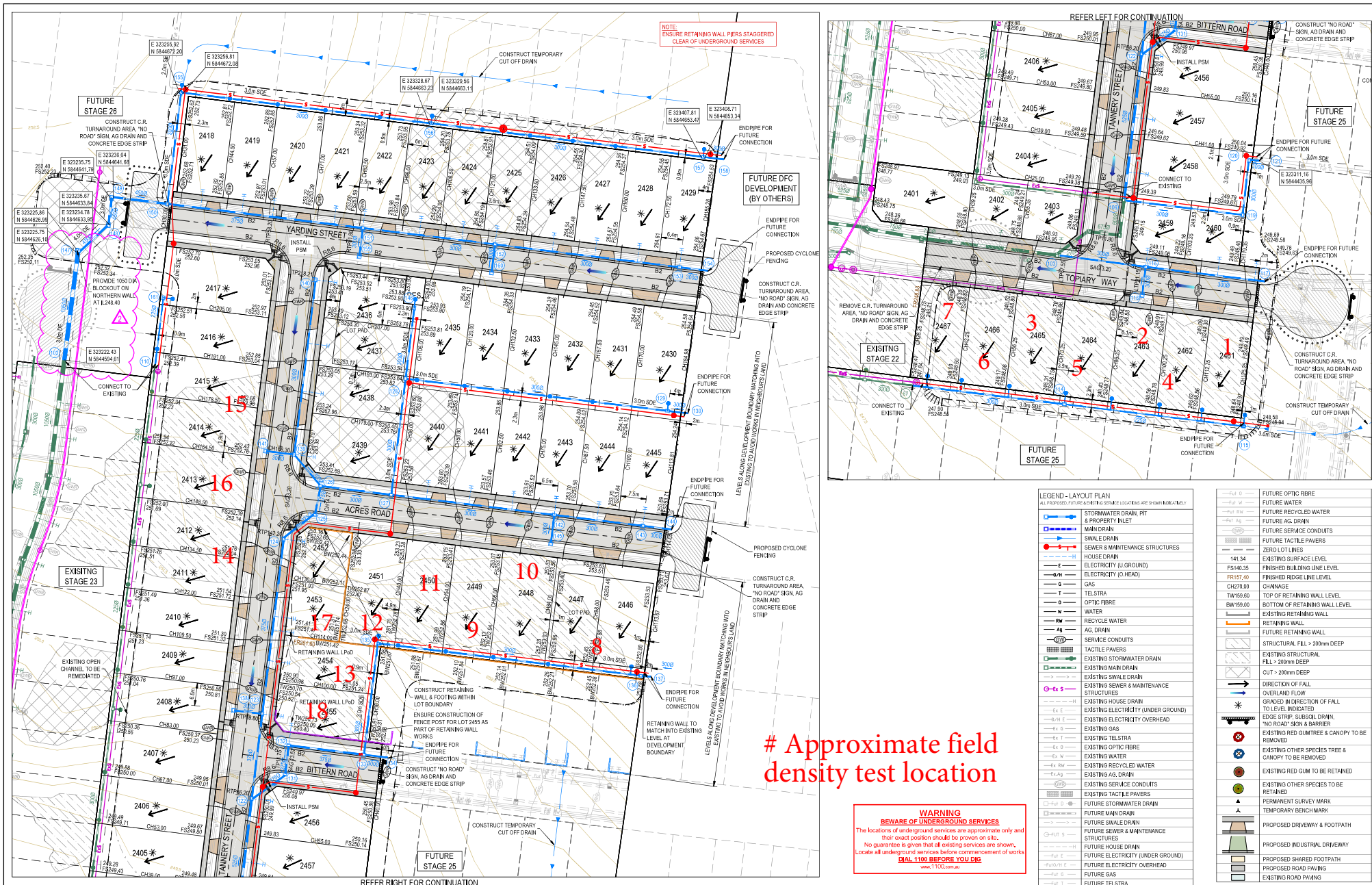
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



Approximate field density test location

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 **CALL 1100 BEFORE YOU DIG**
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DRAFTER	DESIGNER	CHECKER	APPROVER	PLAN OF SUB. NO.
0	22.03.22	ISSUED FOR CONSTRUCTION	L.CHAPPEL	Y.SONG	M.MANGAY	A.BURROWS	PS00088F
1	04.07.22	ROAD NAMES AMENDED	K.LEWONG	Y.SONG	M.MANGAY	A.BURROWS	PERMIT REF. NO.
2	21.11.22	PIPE SIZE UPDATED	Y.SONG	Y.SONG	M.MANGAY	A.BURROWS	719067

SMC
Member of the Surlana Jurong Group
Collins Square, Tower 4 Level 20, 727 Collins St
Melbourne, VIC 3008, Australia
03 9514 1500

mirvac

Olivine Estate - Stage 24
Whittlesea City Council
Road and Drainage
Layout Plan

MELBOURNE REF	PROJECT IDENTIFICATION	DRAWING NO.	REVISION
8M2	1700E-024-111	02 of 27	2



COMPACTION ASSESSMENT

Job No 22208
 Report No 22208/R001
 Date Issued 05/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 24	Date tested	10/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	14:02
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	-	-	-
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	1.87	1.85	1.86	-	-	-
Field moisture content %	25.0	23.0	23.2	-	-	-

Test procedure AS 1289.5.7.1

Test No	1	2	3	-	-	-
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	1.96	1.93	1.93	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	27.5	25.5	26.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% 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}) %	95.0	96.0	96.0	-	-	-
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Material description

No 1 - 3 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 22208
 Report No 22208/R002
 Date Issued 05/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 24	Date tested	11/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	14:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		4	5	6	-	-	-
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	1.90	1.86	1.84	-	-	-
Field moisture content	%	24.5	24.9	20.5	-	-	-

Test procedure AS 1289.5.7.1

Test No		4	5	6	-	-	-
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	1.97	1.96	1.91	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	27.0	27.5	23.0	-	-	-

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.5% 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})	%	96.0	95.0	96.5	-	-	-
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Material description

No 4 - 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 22208
 Report No 22208/R003
 Date Issued 05/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 24	Date tested	18/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:29
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	9	-	-	-
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	1.86	1.85	1.84	-	-	-
Field moisture content %	24.0	18.4	20.5	-	-	-

Test procedure AS 1289.5.7.1

Test No	7	8	9	-	-	-
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	1.94	1.92	1.90	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	26.5	21.0	23.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% 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}) %	96.0	96.0	97.0	-	-	-
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Material description

No 7 - 9 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 22208
 Report No 22208/R004
 Date Issued 09/05/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 24	Date tested	19/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:03
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	10	11	12	-	-	-
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	1.88	1.88	1.88	-	-
Field moisture content	%	22.5	24.0	20.8	-	-

Test procedure AS 1289.5.7.1

Test No	10	11	12	-	-	-
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	1.98	1.96	1.97	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.0	25.5	21.5	-	-

Moisture Variation From Optimum Moisture Content	1.0% dry	1.5% 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 _{HD})	%	95.0	95.5	95.5	-	-
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Material description

No 10 - 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 22208
 Report No 22208/R005
 Date Issued 15/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 24	Date tested	07/09/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:02
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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	1.83	1.86	1.83	1.84	1.85
Field moisture content	%	25.3	24.4	24.7	22.9	17.6

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	1.89	1.92	1.89	1.90	1.93
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	25.5	24.0	25.0	24.0	19.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	1.0% dry	1.5% 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})	%	97.0	96.5	97.0	97.0	95.5	98.0
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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