



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

13th December 2022

Our Reference: 22405:NB1424

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OLIVINE – STAGE 18 & 25 (DONNYBROOK)**

Please find attached our Report No's 22405/R001 to 22405/R015 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 July 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).

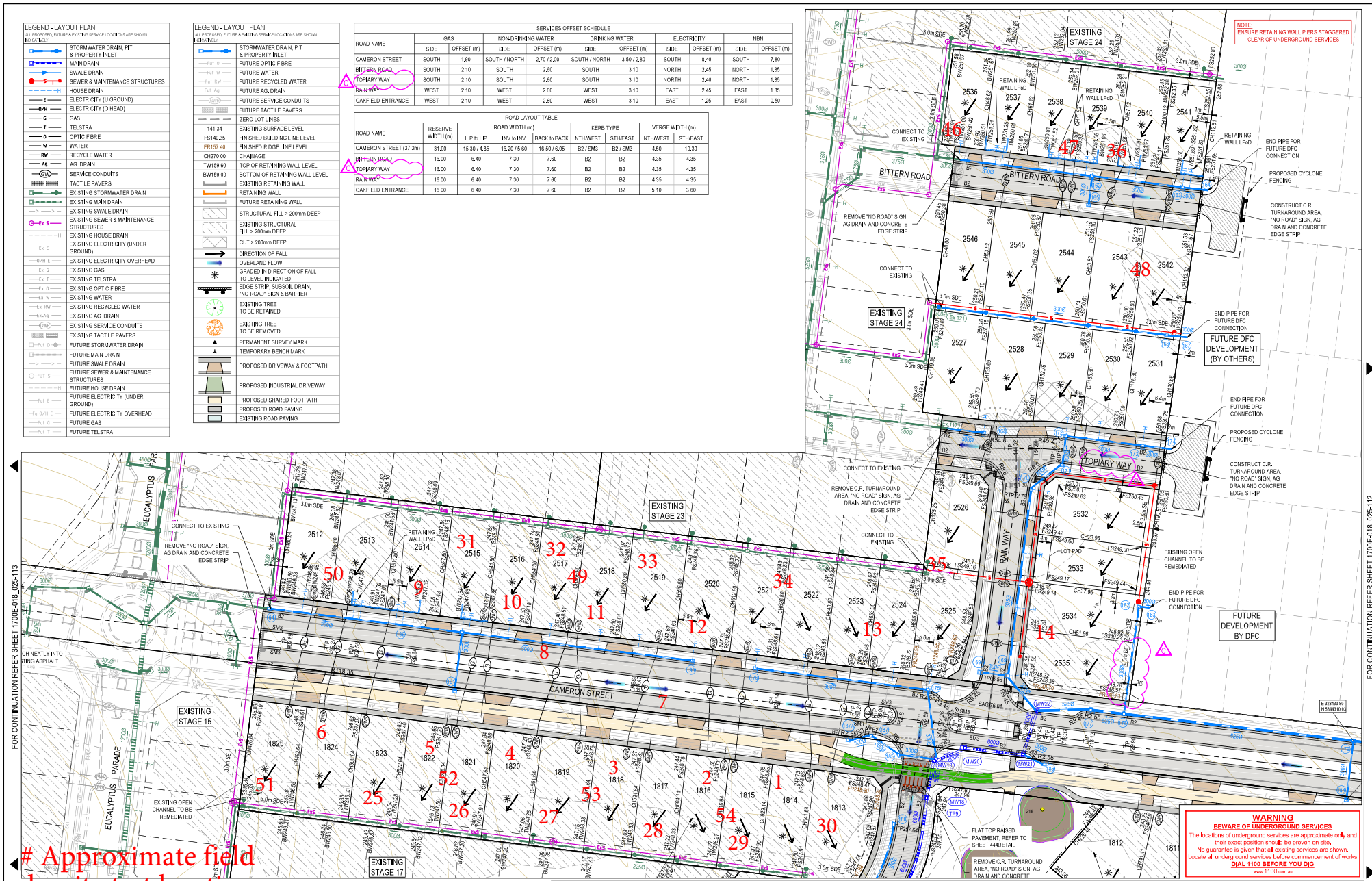
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1 (1 of 3)



Approximate field density test location

FOR CONTINUATION REFER SHEET 1700E-018_025-113

FOR CONTINUATION REFER SHEET 1700E-018_025-112

PLAN OF SUB. NO. PS9052930 & PS9052930

PERMIT REF. NO. 717158 & 719067

Scale 1:500

SCALE AS SHOWN AT A1

SUBJECT TO APPROVAL

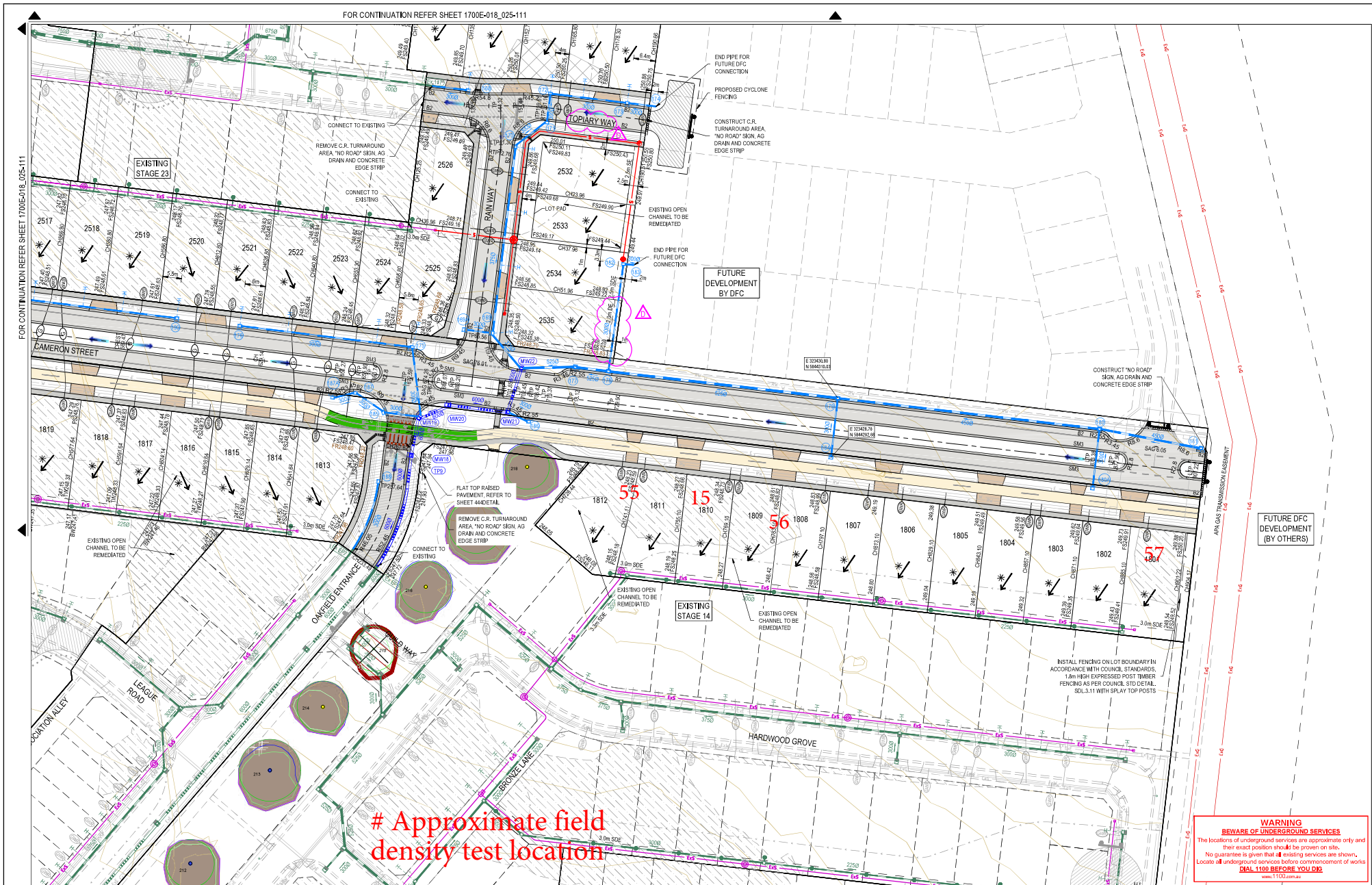
SMC
 Member of the Sutherland Shire Council Group
 Collins Square, Tower 4 Level 20, 727 Collins St
 Melbourne, VIC 3008
 Ph (03) 9514 1500

mirvac

Olive Estate - Stage 18 & 25
 Whittlesea City Council
 Road and Drainage
 Layout Plan - 1

MELBOURNE REF: 367 G11 1700E-018_025-111
 PROJECT DRAWING NO: 02 of 51
 SHEET NO: 02 of 51
 REVISION: C

FIGURE 1 (2 of 3)



REV	DATE	AMENDMENT / REVISION DESCRIPTION
A	11.03.22	ISSUED TO COUNCIL FOR COMMENT
B	22.03.22	CAMERON STREET LEVELS UPDATED
C	3.06.22	INTERSECTIONS UPDATED
D	22.06.22	LOT 2535 EASEMENT & ROAD NAMES UPDATED

DRAFTER	DESIGNER	CHECKER	APPROVER
L.CHAPPELLE	Y.SONG	M.MANGAY	A.BURROWS
L.CHAPPELLE	Y.SONG	M.MANGAY	A.BURROWS
K.LEKOVIC	Y.SONG	T.MOTET	A.BURROWS

PLAN OF SUB. NO. PS905290 & PS905200M

PERMIT REF. NO. 717158 & 719067

SUBJECT TO APPROVAL

Scale 1:500
SCALE AS SHOWN AT A1

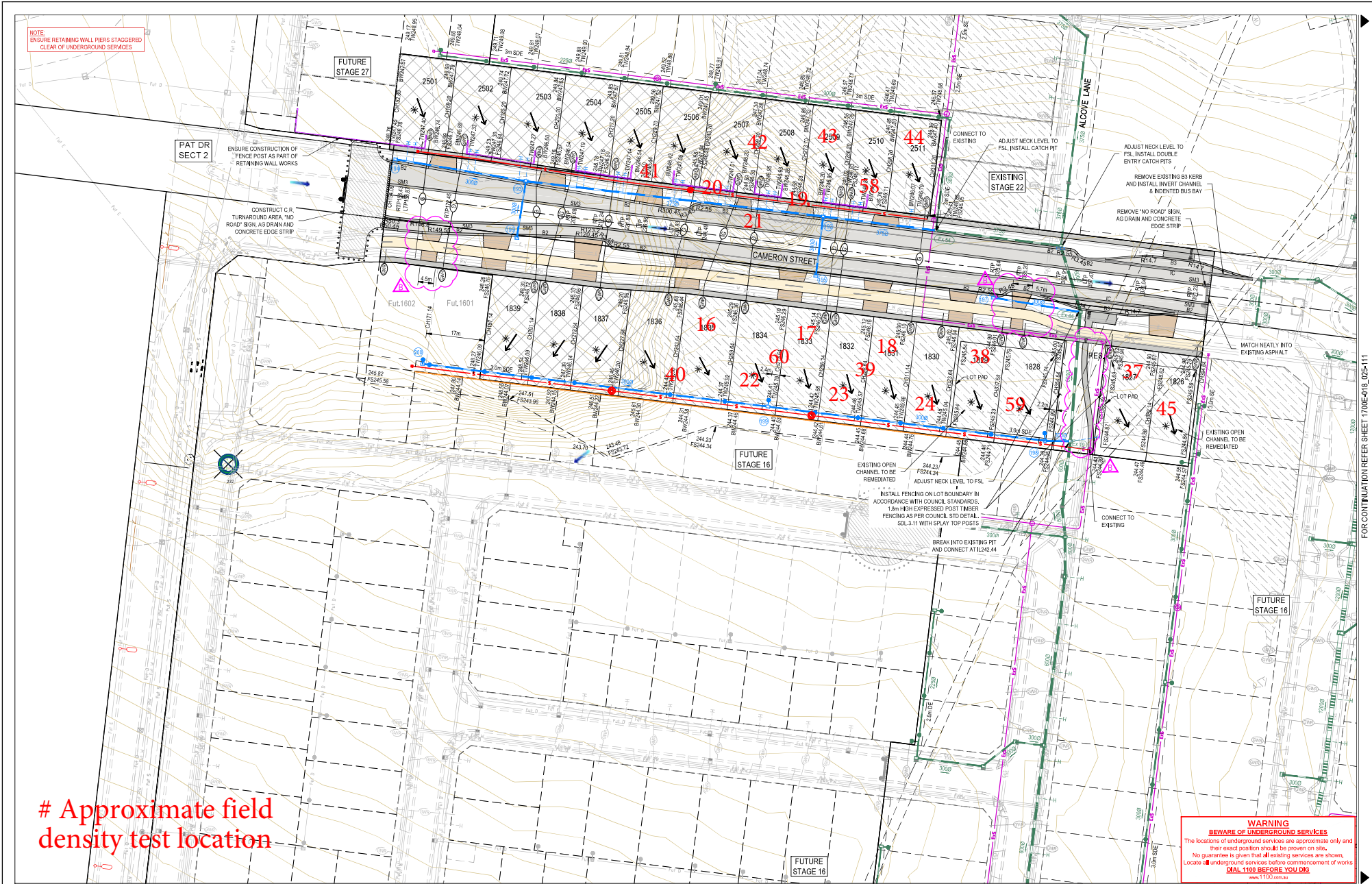
SMEC
Member of the Stantec Junco Group
Collins Square, Tower 4, Level 20, 727 Collins St
Melbourne, VIC 3008
Ph (03) 9514 1500

mirvac

Olivewood - Stage 18 & 25
Whittlesea City Council
Road and Drainage
Layout Plan - 2

REVISIONS REF: 367 G11 1700E-018_025-112
PROJECT DRAWING NO: 03 of 51
SHEET NO: D

FIGURE 1 (3 of 3)



Approximate field density test location

WARNING
BEWARE OF UNDERGROUND SERVICES

The locations of underground services are approximate only and their exact positions 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.**

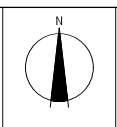
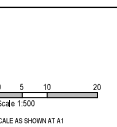
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION
A	11.03.22	ISSUED TO COUNCIL FOR COMMENT
B	3.06.22	FUT LOT 1602 DRIVEWAY WIDENED BY 1M. RESERVE PATH ADDED

DRAFTER	DESIGNER	CHECKER	APPROVER
L.CHAPPLE L.CHAPPLE	Y.SONG Y.SONG	M.MANGAY M.MANGAY	A.BURROWS A.BURROWS

PLAN OF SUB. NO.
P59052090 & P59020000

PERMIT REF. NO.
717158 & 719067



Olive Estate - Stage 18 & 25 Whittlesea City Council Road and Drainage Layout Plan - 3	
MELBURN REF 367 G11 1700E-018_025-113	PROJECT DRAWING NO. 04 of 51
SHEET NO.	REVISION B



COMPACTION ASSESSMENT

Job No 22405
 Report No 22405/R001
 Date Issued 08/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	22/07/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:01
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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	1.85	1.84	1.85	-	-
Field moisture content	%	22.5	27.0	24.1	-	-

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	1.89	1.87	1.90	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	26.5	23.5	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	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})	%	98.0	98.5	97.5	-	-
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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 22405
 Report No 22405/R002
 Date Issued 06/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	25/07/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:03
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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	1.82	1.82	1.81	-	-
Field moisture content	%	24.6	24.4	26.4	-	-

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	1.91	1.88	1.87	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	24.5	25.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	0.0%	1.5% 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})	%	95.5	96.5	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 22405
 Report No 22405/R003
 Date Issued 06/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	27/07/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:03
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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	1.92	1.88	1.82	-	-
Field moisture content	%	28.7	28.4	23.4	-	-

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	1.95	1.90	1.87	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	28.5	28.5	23.5	-	-

Moisture Variation From Optimum Moisture Content	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_{HD})	%	99.0	98.5	97.5	-	-
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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 22405
 Report No 22405/R004
 Date Issued 06/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	28/07/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	12:08
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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	1.89	1.89	-	-
Field moisture content	%	22.1	21.5	21.8	-	-

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	1.90	1.90	1.91	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	20.0	20.0	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	1.5% wet	2.0% 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})	%	99.0	99.0	99.0	-	-
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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 22405
 Report No 22405/R005
 Date Issued 13/12/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	29/07/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:01
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	14	15	-	-	-
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	1.83	1.85	1.85	-	-
Field moisture content	%	24.3	24.9	23.5	-	-

Test procedure AS 1289.5.7.1

Test No	13	14	15	-	-	-
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	1.87	1.89	1.92	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.0	26.5	24.5	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	1.5% 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})	%	97.5	98.0	96.5	-	-
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Material description

No 13 - 15 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 22405
 Report No 22405/R006
 Date Issued 06/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	01/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:03
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	16	17	18	-	-	-
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	1.85	1.84	1.83	-	-
Field moisture content	%	22.5	22.9	24.3	-	-

Test procedure AS 1289.5.7.1

Test No	16	17	18	-	-	-
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	1.92	1.88	1.89	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	21.5	23.5	-	-

Moisture Variation From Optimum Moisture Content	0.0%	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})	%	96.0	98.0	97.0	-	-
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Material description

No 16 - 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 22405
 Report No 22405/R007
 Date Issued 06/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	02/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:26
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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	175
Field wet density t/m ³	1.87	1.86	1.92	1.85	1.85	1.92
Field moisture content %	19.2	21.3	18.8	21.7	24.3	24.9

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m ³	1.96	1.94	1.96	1.91	1.94	2.02
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	21.0	24.0	21.5	24.0	27.0	28.0

Moisture Variation From Optimum Moisture Content	1.5% dry	2.5% dry	2.5% dry	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})	%	95.5	96.0	98.0	96.5	95.5	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 22405
 Report No 22405/R008
 Date Issued 16/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	03/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:58
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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	1.87	1.84	1.87	1.85	1.86
Field moisture content	%	19.4	20.5	18.6	18.1	19.5

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	1.91	1.89	1.94	1.89	1.90
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	22.0	21.5	20.5	22.0

Moisture Variation From Optimum Moisture Content	2.5% dry	1.5% dry	2.5% dry	2.5% 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	98.0	96.5	98.0	98.5	98.5
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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



COMPACTION ASSESSMENT

Job No 22405
 Report No 22405/R009
 Date Issued 16/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by AC
 Date tested 04/08/22
 Checked by JHF

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
Project	OLIVINE - STAGES 18 & 25
Location	DONNYBROOK

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:57
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		31	32	33	34	35	36
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	1.86	1.86	1.84	1.85	1.89	1.87
Field moisture content	%	17.2	22.3	21.0	17.8	17.8	20.6

Test procedure AS 1289.5.7.1

Test No		31	32	33	34	35	36
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	1.92	1.90	1.89	1.94	1.95	1.94
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	19.5	25.0	23.0	20.5	20.0	23.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	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})	%	97.0	97.5	97.0	95.5	97.0	96.5
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Material description

No 31 - 36 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 22405
 Report No 22405/R010
 Date Issued 17/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	08/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:28
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	37	38	39	40	41	42
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	1.87	1.86	1.88	1.85	1.86
Field moisture content	%	24.9	24.4	22.2	18.6	18.3

Test procedure AS 1289.5.7.1

Test No	37	38	39	40	41	42
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	1.95	1.96	1.92	1.92
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	26.5	25.0	21.0	20.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.5% dry	2.5% dry	2.5% 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})	%	96.0	96.0	96.5	96.5	97.0	95.0
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Material description

No 37 - 42 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 22405
 Report No 22405/R011
 Date Issued 17/08/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by AC
 Date tested 12/08/22
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project OLIVINE - STAGES 18 & 25
 Location DONNYBROOK

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:58
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		43	44	45	-	-	-
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	1.85	1.88	1.86	-	-	-
Field moisture content	%	31.5	31.1	30.4	-	-	-

Test procedure AS 1289.5.7.1

Test No		43	44	45	-	-	-
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	1.91	1.92	1.90	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	34.0	33.0	33.0	-	-	-

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})	%	97.0	97.5	98.0	-	-	-
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Material description

No 43 - 45 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 22405
 Report No 22405/R012
 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 - STAGES 18 & 25	Date tested	12/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:26
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	46	47	48	-	-	-
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	1.84	1.85	1.83	-	-
Field moisture content	%	21.6	22.7	17.2	-	-

Test procedure AS 1289.5.7.1

Test No	46	47	48	-	-	-
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	1.87	1.91	1.90	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	25.5	19.5	-	-

Moisture Variation From Optimum Moisture Content	0.5% 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})	%	98.5	97.0	96.5	-	-
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Material description

No 46 - 48 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22405
 Report No 22405/R013
 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 - STAGES 18 & 25	Date tested	16/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:02
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	49	50	51	-	-	-
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	1.87	1.86	-	-
Field moisture content	%	29.4	24.0	25.6	-	-

Test procedure AS 1289.5.7.1

Test No	49	50	51	-	-	-
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	1.95	1.92	1.95	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	32.0	27.0	27.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% 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})	%	95.5	97.5	95.0	-	-
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Material description

No 49 - 51 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 22405
 Report No 22405/R014
 Date Issued 20/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	22/08/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:36
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	52	53	54	-	-	-
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	1.84	1.84	1.85	-	-
Field moisture content	%	28.1	28.3	25.1	-	-

Test procedure AS 1289.5.7.1

Test No	52	53	54	-	-	-
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	1.90	1.91	1.92	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	28.5	29.5	25.0	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	1.0% 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})	%	97.5	96.5	96.5	-	-
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Material description

No 52 - 54 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 22405
 Report No 22405/R015
 Date Issued 14/09/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGES 18 & 25	Date tested	05/09/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:03
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	55	56	57	58	59	60
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 <i>mm</i>	175	175	175	175	175	175
Field wet density <i>t/m³</i>	1.84	1.85	1.86	1.83	1.85	1.84
Field moisture content %	20.2	15.6	22.1	20.0	27.1	22.5

Test procedure AS 1289.5.7.1

Test No	55	56	57	58	59	60
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material <i>wet</i>	0	0	0	0	0	0
Peak Converted Wet Density <i>t/m³</i>	1.91	1.93	1.96	1.92	1.91	1.90
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	22.0	18.0	23.5	20.0	28.5	23.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	1.5% dry	0.0%	1.5% 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})	%	96.5	96.0	95.0	95.5	97.0	97.0
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Material description

No 55 - 60 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry