



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

10th February 2022

Our Reference: 21210:NB1149

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OLIVINE – STAGE 14 (DONNYBROOK)

Please find attached our Report No's 21210/R001 to 21210/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 testing commenced in August 2021 and was completed in September 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).

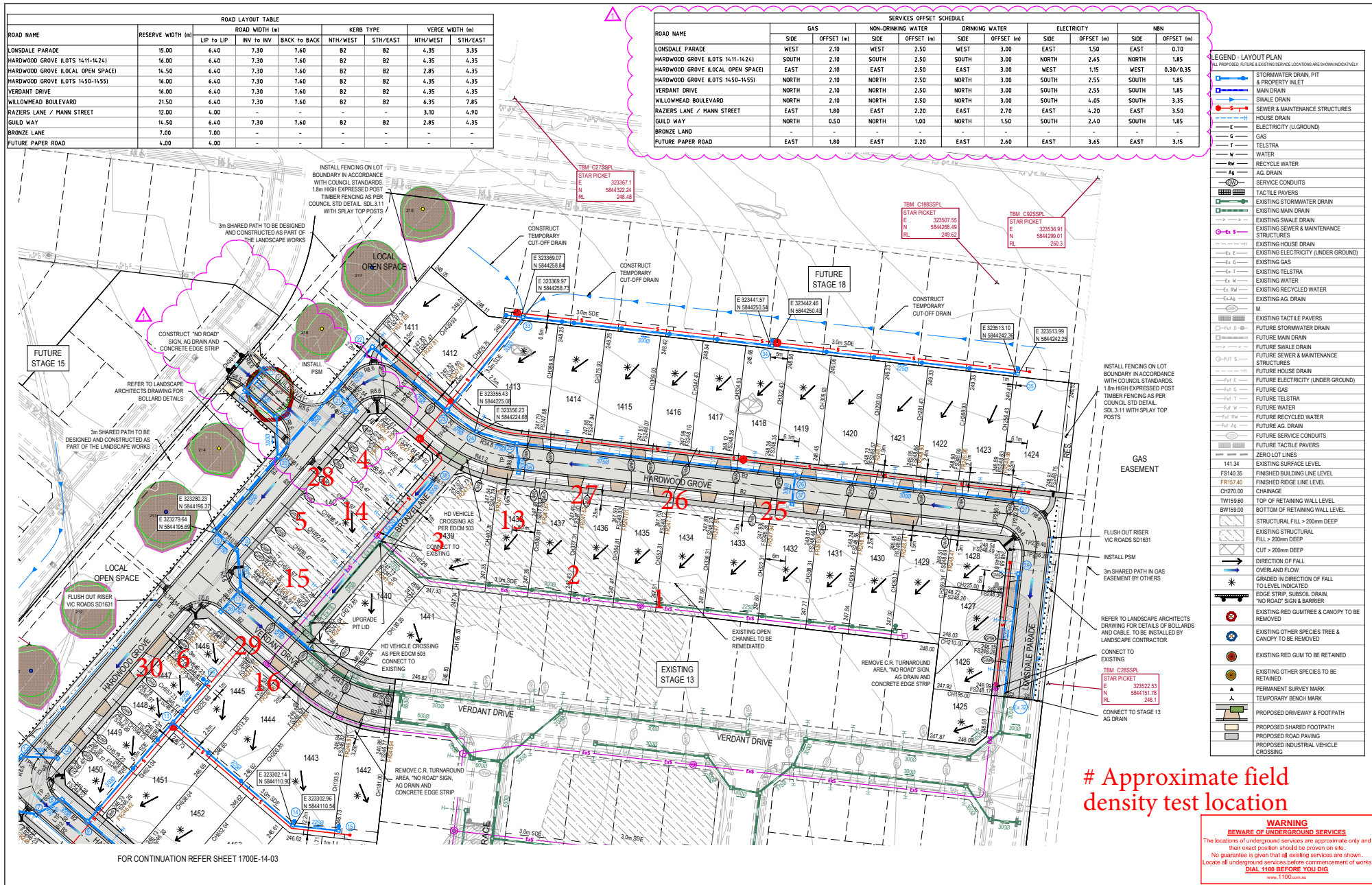
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1 (1 of 2)



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

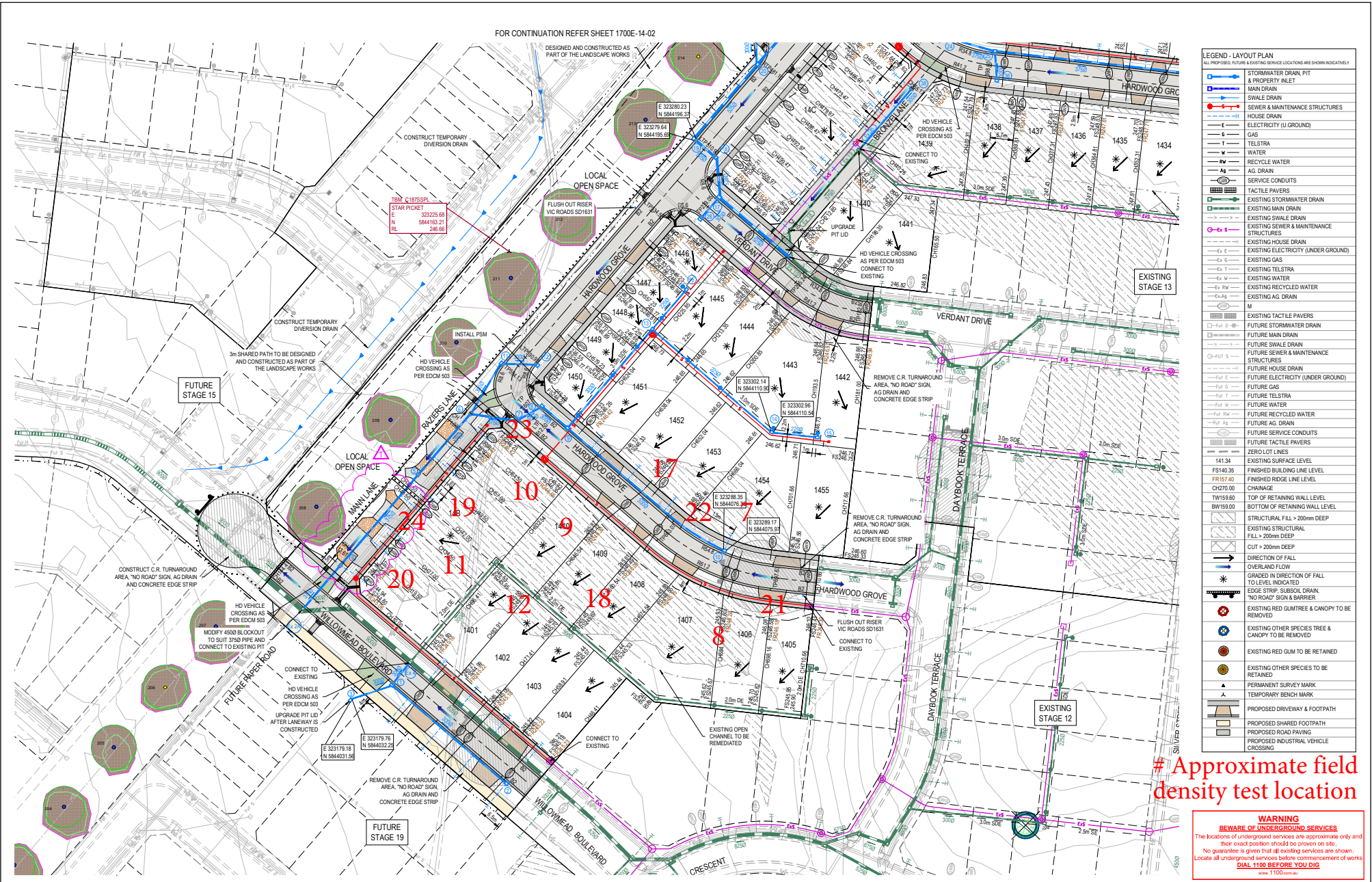
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL	DESCRIPTION	TITLE	NAME
0	30.03.21	ISSUED FOR CONSTRUCTION	YSYS	AB	All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.	DRAFTER	Y. Song
1	29.04.22	NBN OFFSETS UPDATED	YSNM	AB		DESIGNER	Y. Song
						CHECKED	M. Angay
						AUTHORISED	A. Burrows
						REFERENCE No. 1	1700E-14
						REFERENCE No. 2	

--	--	--

ISSUED FOR CONSTRUCTION		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>MELBURA REF</td> <td>PROJECT / DRAWING No.</td> <td>SHEET No.</td> <td>REVISION</td> </tr> <tr> <td>8 M2</td> <td>1700E-14-02</td> <td>02 of 27</td> <td>1</td> </tr> </table>	MELBURA REF	PROJECT / DRAWING No.	SHEET No.	REVISION	8 M2	1700E-14-02	02 of 27	1
MELBURA REF	PROJECT / DRAWING No.	SHEET No.	REVISION							
8 M2	1700E-14-02	02 of 27	1							

FIGURE 1 (2 of 2)

FOR CONTINUATION REFER SHEET 1700E-14-02



LEGEND - LAYOUT PLAN
ALL PROPOSED FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

- STORMWATER DRAIN, PIT & PROPERTY INLET
- MAIN DRAIN
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- ELECTRICITY (U/GROUND)
- GAS
- TELSTRA
- WATER
- RECYCLE WATER
- AG DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS
- EXISTING STORMWATER DRAIN
- EXISTING MAIN DRAIN
- EXISTING SWALE DRAIN
- EXISTING SEWER & MAINTENANCE STRUCTURES
- EXISTING HOUSE DRAIN
- EXISTING ELECTRICITY (UNDER GROUND)
- EXISTING GAS
- EXISTING TELSTRA
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING AG DRAIN
- M
- EXISTING TACTILE PAVERS
- FUTURE STORMWATER DRAIN
- FUTURE MAIN DRAIN
- FUTURE SWALE DRAIN
- FUTURE SEWER & MAINTENANCE STRUCTURES
- FUTURE HOUSE DRAIN
- FUTURE ELECTRICITY (UNDER GROUND)
- FUTURE GAS
- FUTURE TELSTRA
- FUTURE WATER
- FUTURE RECYCLED WATER
- FUTURE AG DRAIN
- FUTURE SERVICE CONDUITS
- FUTURE TACTILE PAVERS
- EXISTING SURFACE LEVEL
- FINISHED BUILDING LEVEL
- FINISHED RIDGE LINE LEVEL
- CH270.00
- CHANGE
- TOP OF RETAINING WALL LEVEL
- TW155.50
- BW159.00
- BOTTOM OF RETAINING WALL LEVEL
- STRUCTURAL FILL > 200mm DEEP
- EXISTING STRUCTURAL FILL > 200mm DEEP
- CUT > 200mm DEEP
- DIRECTION OF FALL
- OVERLAND FLOW
- GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
- EDGE STRIP, SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
- EXISTING RED GUM TREE & CANOPY TO BE REMOVED
- EXISTING RED GUM TO BE RETAINED
- EXISTING OTHER SPECIES TO BE RETAINED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY & FOOTPATH
- PROPOSED SHARED FOOTPATH
- PROPOSED ROAD PAVING
- PROPOSED INDUSTRIAL VEHICLE CROSSING

Approximate field density test location

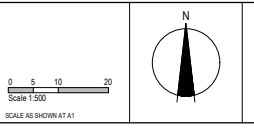
WARNING
BWARE OF UNDERGROUND SERVICES
The locations of underground services are approximate only and their exact position should be proven on site.
No guarantee is given that all existing services are shown.
Locate all underground services before commencement of works
DIAL 1100 BEFORE YOU DIG
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.03.21	ISSUED FOR CONSTRUCTION	YSYS	AB
1	29.04.23	MAIN STREET CHANGED TO MAIN LANE	YSNM	AB

ISSUED FOR CONSTRUCTION

TITLE	NAME
DRAFTER	Y.Song
DESIGNER	Y.Song
CHECKED	M.Angay
AUTHORISED	A.Burrows
REFERENCE No. 1	1700E-14
REFERENCE No. 2	

Scale 1:500
SCALE AS SHOWN AT A1



SMEC
Member of the Surlana Jurong Group
ABN 47 965 475 149
Colles Square, Tower 4, Level 20, 727 Colles St
Melbourne, VIC 3008
Ph 03 9514 1500

mirvac

MELBAYS REF 8 M2	PROJECT/DRAWING No. 1700E-14-03	SHEET No. 03 of 27	REVISION 1
----------------------------	---	------------------------------	----------------------

Oliver Estate - Stage 14
Whittlesea City Council
Road and Drainage
Layout Plan - 2



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21210
Report No 21210/R001
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 14	Date tested	27/08/21
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:33
---------	------------	-----------------	--------	-------------

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	175
Field wet density	t/m ³	1.86	1.86	1.87	1.88	1.92	1.86
Field moisture content	%	28.4	27.3	27.0	25.1	26.0	26.5

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	19.0
Percent of oversize material	wet	0	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.91	1.92	1.93	1.94	1.98	1.94
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	29.5	29.5	30.0	28.0	28.5	27.5

Moisture Variation From Optimum Moisture Content	1.0% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry	0.5% dry
--	----------	----------	----------	----------	----------	----------

Density Ratio (R _{HD})	%	97.5	97.0	97.0	97.0	97.0	96.0
-----------------------------------	---	------	------	------	------	------	------

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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21210
Report No 21210/R002
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 14	Date tested	31/08/21
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:29
---------	------------	-----------------	--------	-------------

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	175
Field wet density	t/m ³	1.91	1.89	1.89	1.86	1.85	1.86
Field moisture content	%	26.2	28.6	25.8	29.0	27.2	28.7

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	19.0
Percent of oversize material	wet	0	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.99	1.99	1.95	1.91	1.92	1.94
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	23.5	29.0	25.0	28.5	27.5	29.0

Moisture Variation From Optimum Moisture Content	2.5% wet	0.5% dry	1.0% wet	0.0%	0.0%	0.0%
--	----------	----------	----------	------	------	------

Density Ratio (R _{HD})	%	96.0	95.0	97.0	97.0	96.5	96.0
-----------------------------------	---	------	------	------	------	------	------

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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21210
 Report No 21210/R003
 Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 14	Date tested	07/09/21
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:03
----------------	-------------------	-----------------	--------	-------------

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	175
Field wet density t/m³	1.87	1.84	1.86	1.86	1.85	1.86
Field moisture content %	23.8	22.8	22.1	25.4	27.3	27.5

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m³	1.90	1.88	1.89	1.91	1.93	1.90
Adjusted Peak Converted Wet Density t/m³	-	-	-	-	-	-
Optimum Moisture Content %	26.0	23.5	24.0	28.0	29.0	30.0

Moisture Variation From Optimum Moisture Content	2.0% dry	0.5% dry	2.0% dry	2.5% dry	1.5% dry	2.5% dry
--	----------	----------	----------	----------	----------	----------

Density Ratio (R_{HD})	%	98.0	97.5	98.5	97.5	96.0	97.5
---	----------	-------------	-------------	-------------	-------------	-------------	-------------

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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21210
Report No 21210/R004
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 14	Date tested	07/09/21
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:57
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	19	20	-	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate depth below FSL						
Measurement depth	mm	175	175	-	-	-
Field wet density	t/m ³	1.88	1.87	-	-	-
Field moisture content	%	24.0	18.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	19	20	-	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	-	-	-
Percent of oversize material	wet	0	0	-	-	-
Peak Converted Wet Density	t/m ³	1.93	1.90	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	20.5	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	2.0% dry	-	-	-	-
--	----------	----------	---	---	---	---

Density Ratio (R _{HD})	%	97.5	98.0	-	-	-
-----------------------------------	---	------	------	---	---	---

Material description

No 19 - 20 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 21210
 Report No 21210/R005
 Date Issued 12/10/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 14	Date tested	15/09/21
Location	DONNYBROOK	Checked by	JHF

Feature	STRUCTURAL FILL	Layer thickness	200 mm	Time: 11:01
---------	-----------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	21	22	23	24	25	26
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	1.91	1.91	1.91	1.92	1.90
Field moisture content	%	25.0	31.5	25.7	32.4	30.6

Test procedure AS 1289.5.7.1

Test No	21	22	23	24	25	26
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	1.92	1.91	1.93	1.94	1.90
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	30.5	25.0	30.5	31.0

Moisture Variation From Optimum Moisture Content	2.5% wet	1.0% wet	0.5% wet	1.5% wet	0.5% dry	2.5% wet
--	----------	----------	----------	----------	----------	----------

Density Ratio (R _{HD})	%	99.0	100.0	99.0	99.0	100.0	99.0
-----------------------------------	---	------	-------	------	------	-------	------

Material description

No 21 - 26 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 21210
 Report No 21210/R006
 Date Issued 12/10/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 14	Date tested	16/09/21
Location	DONNYBROOK	Checked by	JHF

Feature	STRUCTURAL FILL	Layer thickness	200 mm	Time: 12:06
---------	-----------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	27	28	29	30	-	-
Location	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	-
Field wet density	t/m ³	1.85	1.89	1.91	1.85	-
Field moisture content	%	32.0	30.6	30.4	30.0	-

Test procedure AS 1289.5.7.1

Test No	27	28	29	30	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	-
Percent of oversize material	wet	0	0	0	0	-
Peak Converted Wet Density	t/m ³	1.87	1.90	1.92	1.89	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	29.5	30.0	31.0	29.5	-

Moisture Variation From Optimum Moisture Content	2.0% wet	0.5% wet	0.5% dry	0.5% wet	-	-
--	----------	----------	----------	----------	---	---

Density Ratio (R _{HD})	%	99.0	99.5	99.0	98.5	-
-----------------------------------	---	------	------	------	------	---

Material description

No 27 - 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