



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

18th March 2022

Our Reference: 21827:NB1171

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OLIVINE – STAGE 22 (DONNYBROOK)

Please find attached our Report No's 21827/R001 to 21827/R013 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 2022 and was completed in March 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).

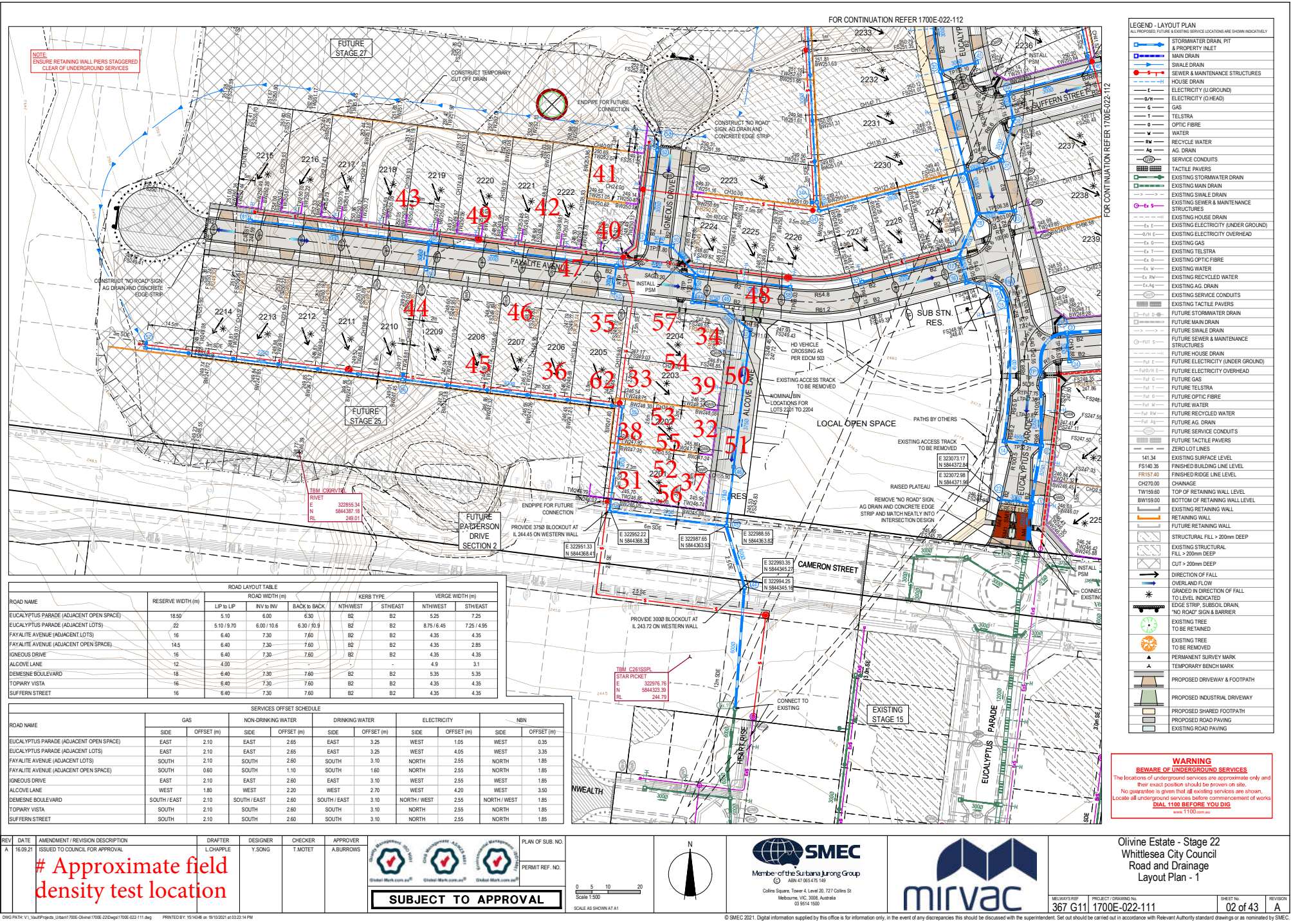
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1 (1 of 2)



NOTE: ENSURE RETAINING WALL PIERS STAGGERED CLEAR OF UNDERGROUND SERVICES

FOR CONTINUATION REFER 1700E-022-112

FOR CONTINUATION REFER 1700E-022-112

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)
- ELECTRICITY (O/HEAD)
- GAS
- TELSTRA
- OPTIC FIBRE
- 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 ELECTRICITY OVERHEAD
- EXISTING GAS
- EXISTING TELSTRA
- EXISTING OPTIC FIBRE
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING AG DRAIN
- EXISTING SERVICE CONDUITS
- EXISTING TACTILE PAVERS
- FUTURE STORMWATER DRAIN
- FUTURE MAIN DRAIN
- FUTURE SWALE DRAIN
- FUTURE SEWER & MAINTENANCE STRUCTURES
- FUTURE HOUSE DRAIN
- FUTURE ELECTRICITY (UNDER GROUND)
- FUTURE ELECTRICITY OVERHEAD
- FUTURE GAS
- FUTURE TELSTRA
- FUTURE OPTIC FIBRE
- FUTURE WATER
- FUTURE RECYCLED WATER
- FUTURE AG DRAIN
- FUTURE SERVICE CONDUITS
- FUTURE TACTILE PAVERS
- ZERO LOT LINES
- EXISTING SURFACE LEVEL
- EXISTING FINISHED BUILDING LEVEL
- EXISTING FINISHED RIDGE LINE LEVEL
- CHANGE
- TOP OF RETAINING WALL LEVEL
- BOTTOM OF RETAINING WALL LEVEL
- EXISTING RETAINING WALL
- RETAINING WALL
- FUTURE RETAINING WALL
- STRUCTURAL FALL > 200mm DEEP
- EXISTING STRUCTURAL FALL > 200mm DEEP
- CUT > 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 TREE
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY & FOOTPATH
- PROPOSED INDUSTRIAL DRIVEWAY
- PROPOSED SHARED FOOTPATH
- PROPOSED ROAD PAVING
- EXISTING ROAD PAVING

WARNING
BEWARE OF UNDERGROUND SERVICES
The locations of underground services are approximate only and their exact location 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

ROAD LAYOUT TABLE

ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)				KERB TYPE				VERGE WIDTH (m)			
		LIP to LIP	INV to INV	BACK to BACK		NTH-WEST	STH-EAST	NTH-WEST	STH-EAST	NTH-WEST	STH-EAST	NTH-WEST	STH-EAST
EUCALYPTUS PARADE (ADJACENT OPEN SPACE)	18.50	5.10	6.00	6.30	B2	B2			5.25	7.25			
EUCALYPTUS PARADE (ADJACENT LOTS)	22	5.10 / 9.70	6.00 / 10.6	6.30 / 10.9	B2	B2			8.75 / 6.45	7.25 / 4.95			
FAYALITE AVENUE (ADJACENT LOTS)	16	6.40	7.30	7.60	B2	B2			4.35	4.35			
FAYALITE AVENUE (ADJACENT OPEN SPACE)	14.5	6.40	7.30	7.60	B2	B2			4.35	2.85			
IGNEOUS DRIVE	16	6.40	7.30	7.60	B2	B2			4.35	4.35			
ALCOVE LANE	12	4.00			B2	B2			4.9	3.1			
DEMESNE BOULEVARD	18	6.40	7.30	7.60	B2	B2			5.35	5.35			
TOPHARY VISTA	16	6.40	7.30	7.60	B2	B2			4.35	4.35			
SUFFERN STREET	16	6.40	7.30	7.60	B2	B2			4.35	4.35			

SERVICES OFFSET SCHEDULE

ROAD NAME	GAS		NON-DRINKING WATER		DRINKING WATER		ELECTRICITY		M/N	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
EUCALYPTUS PARADE (ADJACENT OPEN SPACE)	EAST	2.10	EAST	2.65	EAST	3.25	WEST	1.05	WEST	0.35
EUCALYPTUS PARADE (ADJACENT LOTS)	EAST	2.10	EAST	2.65	EAST	3.25	WEST	4.05	WEST	3.35
FAYALITE AVENUE (ADJACENT LOTS)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.55	NORTH	1.85
FAYALITE AVENUE (ADJACENT OPEN SPACE)	SOUTH	0.60	SOUTH	1.10	SOUTH	1.60	NORTH	2.55	NORTH	1.85
IGNEOUS DRIVE	EAST	2.10	EAST	2.60	EAST	3.10	WEST	2.55	WEST	1.85
ALCOVE LANE	WEST	1.80	WEST	2.20	WEST	2.70	WEST	4.20	WEST	3.50
DEMESNE BOULEVARD	SOUTH / EAST	2.10	SOUTH / EAST	2.60	SOUTH / EAST	3.10	NORTH / WEST	2.55	NORTH / WEST	1.85
TOPHARY VISTA	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.55	NORTH	1.85
SUFFERN STREET	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.55	NORTH	1.85

REV | DATE | AMENDMENT / REVISION DESCRIPTION | DRAFTER | DESIGNER | CHECKER | APPROVER

A | 16.08.21 | ISSUED TO COUNCIL FOR APPROVAL | L.CHAPPELLE | Y.SONG | T.MOTER | A.BURROWS

Approximate field density test location

PLAN OF SUB. NO. | PERMIT REF. NO. | SUBJECT TO APPROVAL

Scale 1:500 | SCALE AS SHOWN AT A1

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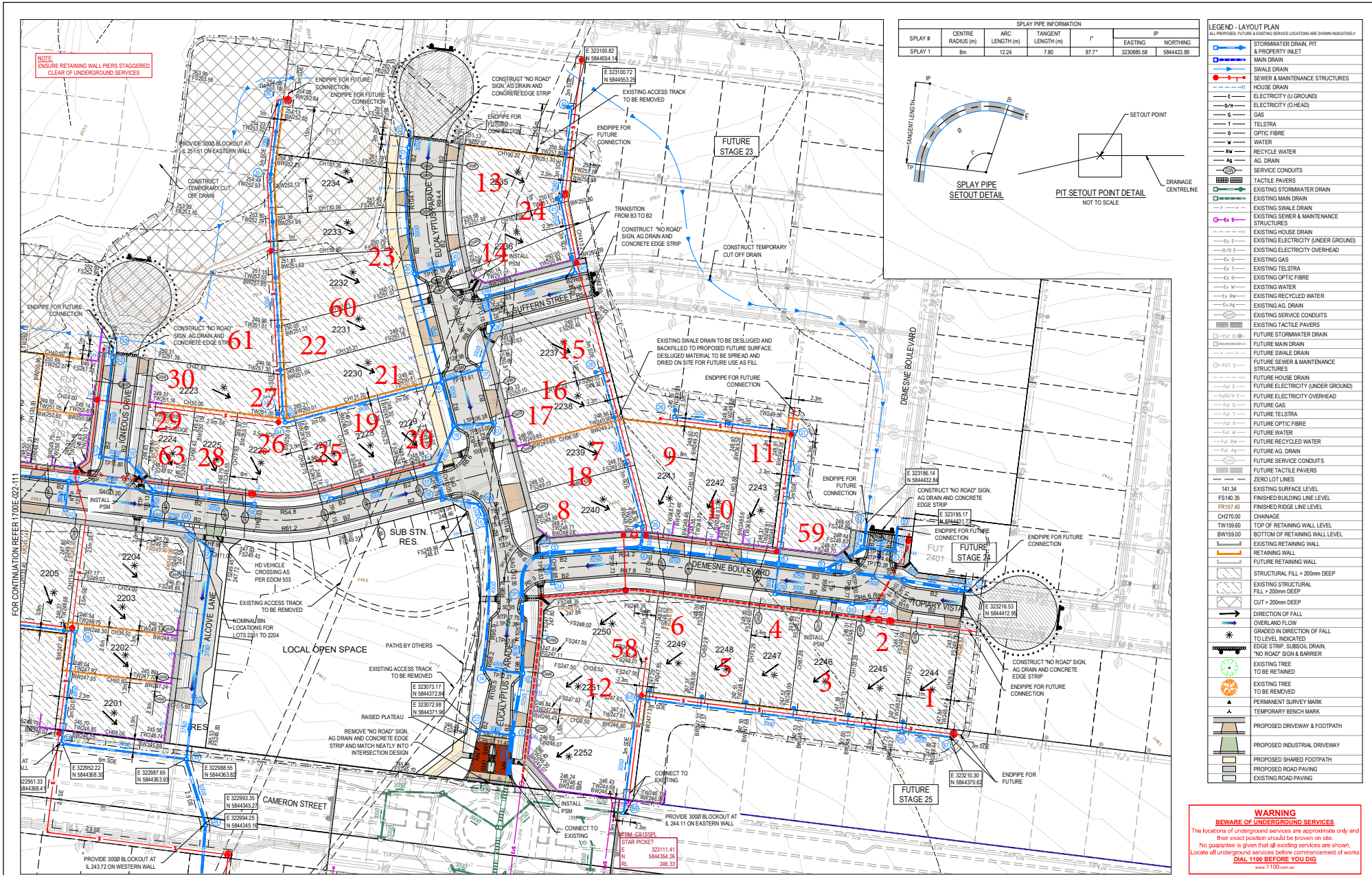
OLIVINE ESTATE - STAGE 22
WHITTLESEA CITY COUNCIL
ROAD AND DRAINAGE
LAYOUT PLAN - 1

MELBOURNE REF: 367 G11 1700E-022-111 | PROJECT/DRAWING NO. | SHEET NO. 02 of 43 | REVISION A

SMEC
Member of the Subana Junong Group
Collins Square, Tower 4, Level 20, 727 Collins St
Melbourne, VIC 3008, Australia
03 9514 1500

mirvac

FIGURE 1 (2 of 2)



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	DESIGNER	CHECKER	APPROVER
A	16.08.21	ISSUED TO COUNCIL FOR APPROVAL CONNECTION	L.CHAPPEL	Y.SONG	T.MOTET	A.BURROWS

Approximate field density test location

PLAN OF SUB. NO. _____

PERMIT REF. NO. _____

SUBJECT TO APPROVAL

Scale 1:500
SCALE AS SHOWN AT A1

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SMCC
Member of the Subana Junong Group
A/N 47 905 470 149
Colles Square, Tower 4 Level 20, 727 Colles St
Melbourne, VIC 3008, Australia
03 9514 1500

mirvac

MELBOURNE REF: 367 G11
PROJECT/DRAWING NO: 1700E-022-112
SHEET NO: 03 of 43
JOB NO: A

Olivine Estate - Stage 22
Whittlesea City Council
Road and Drainage
Layout Plan - 2



COMPACTION ASSESSMENT

Job No 21827
 Report No 21827/R001
 Date Issued 11/02/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	09/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	07:34
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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	1.98	2.01	2.00	1.92	1.87
Field moisture content	%	21.2	16.9	17.3	14.4	18.7

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	2.03	2.05	2.03	1.97	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.5	19.5	20.0	16.5	21.0

Moisture Variation From Optimum Moisture Content	2.0% 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})	%	98.0	98.5	98.5	98.0	98.0	98.5
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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 21827
 Report No 21827/R002
 Date Issued 11/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	10/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	08:30
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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	1.90	1.89	1.89	1.95	1.95
Field moisture content	%	16.0	21.9	18.9	18.5	21.3

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	1.95	1.92	1.93	1.98	1.97
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.0	24.0	21.5	21.0	23.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.0% 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	98.0	98.0	99.0	99.0
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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

Job No 21827
 Report No 21827/R003
 Date Issued 24/02/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	11/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:23
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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 ³	1.85	1.86	1.91	1.85	1.85
Field moisture content	%	18.7	18.4	18.0	18.3	19.6

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	1.91	1.93	1.94	1.92	1.89
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.5	21.0	20.0	20.5	22.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	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})	%	96.5	96.5	98.5	96.5	98.0	98.5
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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 21827
 Report No 21827/R004
 Date Issued 24/02/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	14/02/22
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	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 ³	1.93	1.94	1.93	1.91	1.86	1.91
Field moisture content	%	18.0	17.5	15.4	19.7	16.5	17.3

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	1.99	1.99	1.97	1.98	1.93	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	20.5	20.0	18.0	22.5	17.5	20.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	1.0% 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	96.5	96.5	100.0
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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 21827
 Report No 21827/R005
 Date Issued 22/02/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	17/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:32
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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	1.94	1.94	1.88	1.92	1.91	1.89
Field moisture content	%	17.9	21.8	21.0	19.7	20.4	20.0

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	2.00	1.99	1.91	1.98	1.96	1.96
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	20.5	24.5	23.5	22.0	23.0	23.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% 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})	%	97.0	97.5	98.5	97.0	97.5	97.0
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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 21827
 Report No 21827/R006
 Date Issued 03/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	18/02/22
Location	DONNYBROOK	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	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
Field wet density	t/m ³	1.91	1.89	1.95	1.91	1.95
Field moisture content	%	18.3	16.6	19.1	17.9	16.6

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.98	1.99	1.99	1.97	1.99
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.0	18.5	21.5	20.5	19.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% 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})	%	96.5	95.0	98.0	96.5	98.0	100.0
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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 21827
 Report No 21827/R007
 Date Issued 02/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	WS
Project	OLIVINE - STAGE 22	Date tested	22/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	37	38	39	-	-	-
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	1.99	2.02	1.89	-	-
Field moisture content	%	17.9	14.7	14.8	-	-

Test procedure AS 1289.5.7.1

Test No	37	38	39	-	-	-
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	2.03	2.05	1.91	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	20.5	17.5	17.5	-	-

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})	%	98.5	98.5	98.5	-	-
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Material description

No 37 - 39 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 21827
 Report No 21827/R008
 Date Issued 03/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	WS
Project	OLIVINE - STAGE 22	Date tested	23/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:45
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	40	41	42	-	-	-
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	2.12	2.08	2.06	-	-
Field moisture content	%	13.4	14.3	11.7	-	-

Test procedure AS 1289.5.7.1

Test No	40	41	42	-	-	-
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	2.15	2.12	2.09	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.5	14.5	14.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	0.0%	2.0% 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})	%	99.0	98.5	98.5	-	-
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Material description

No 40 - 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 21827
 Report No 21827/R009
 Date Issued 28/02/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	OLIVINE - STAGE 22	Date tested	24/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:47
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	43	44	45	46	47	48
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	2.15	2.09	2.08	2.02	1.90
Field moisture content	%	18.9	20.1	14.0	11.8	17.4

Test procedure AS 1289.5.7.1

Test No	43	44	45	46	47	48
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	2.18	2.10	2.13	2.08	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.5	23.0	15.5	14.0	20.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	1.5% 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})	%	98.5	99.5	98.0	97.0	98.0	99.0
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Material description

No 43 - 48 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 21827
 Report No 21827/R010
 Date Issued 03/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	28/02/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	49	50	51	52	53	54
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	1.90	1.91	1.95	1.94	1.93
Field moisture content	%	18.9	19.0	17.3	20.9	17.0

Test procedure AS 1289.5.7.1

Test No	49	50	51	52	53	54
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	1.90	1.91	1.95	1.92
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.0	21.5	20.0	23.5	20.5

Moisture Variation From Optimum Moisture Content	2.0% 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})	%	100.5	100.5	102.0	99.5	100.5	99.5
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Material description

No 49 - 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 21827
 Report No 21827/R011
 Date Issued 16/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	01/03/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:34
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	55	56	57	-	-	-
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	1.86	1.88	-	-
Field moisture content	%	19.1	16.5	16.0	-	-

Test procedure AS 1289.5.7.1

Test No	55	56	57	-	-	-
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	1.93	1.89	1.93	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	20.5	19.0	16.0	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	2.5% 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 _{HD})	%	96.0	98.5	97.5	-	-
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Material description

No 55 - 57 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21827
 Report No 21827/R012
 Date Issued 16/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	02/03/22
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	58	59	60	-	-	-
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	1.89	1.88	1.90	-	-
Field moisture content	%	18.4	13.6	19.4	-	-

Test procedure AS 1289.5.7.1

Test No	58	59	60	-	-	-
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	1.92	1.95	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	21.0	14.0	22.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	0.0%	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})	%	99.0	97.5	97.5	-	-
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Material description

No 58 - 60 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 21827
 Report No 21827/R013
 Date Issued 16/03/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 22	Date tested	03/03/22
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:34
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	61	62	63	-	-	-
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	1.89	1.88	1.89	-	-
Field moisture content	%	13.9	15.1	20.4	-	-

Test procedure AS 1289.5.7.1

Test No	61	62	63	-	-	-
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	1.91	1.92	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	16.5	17.5	21.0	-	-

Moisture Variation From Optimum Moisture Content	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})	%	98.5	98.5	99.0	-	-
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Material description

No 61 - 63 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