



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

30th January 2020

Our Reference: 19121:NB655

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OLIVINE – STAGE 5A (DONNYBROOK)

Please find attached our Report No's 19121/R001 to 19121/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 March 2019 and was completed in November 2019.

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)

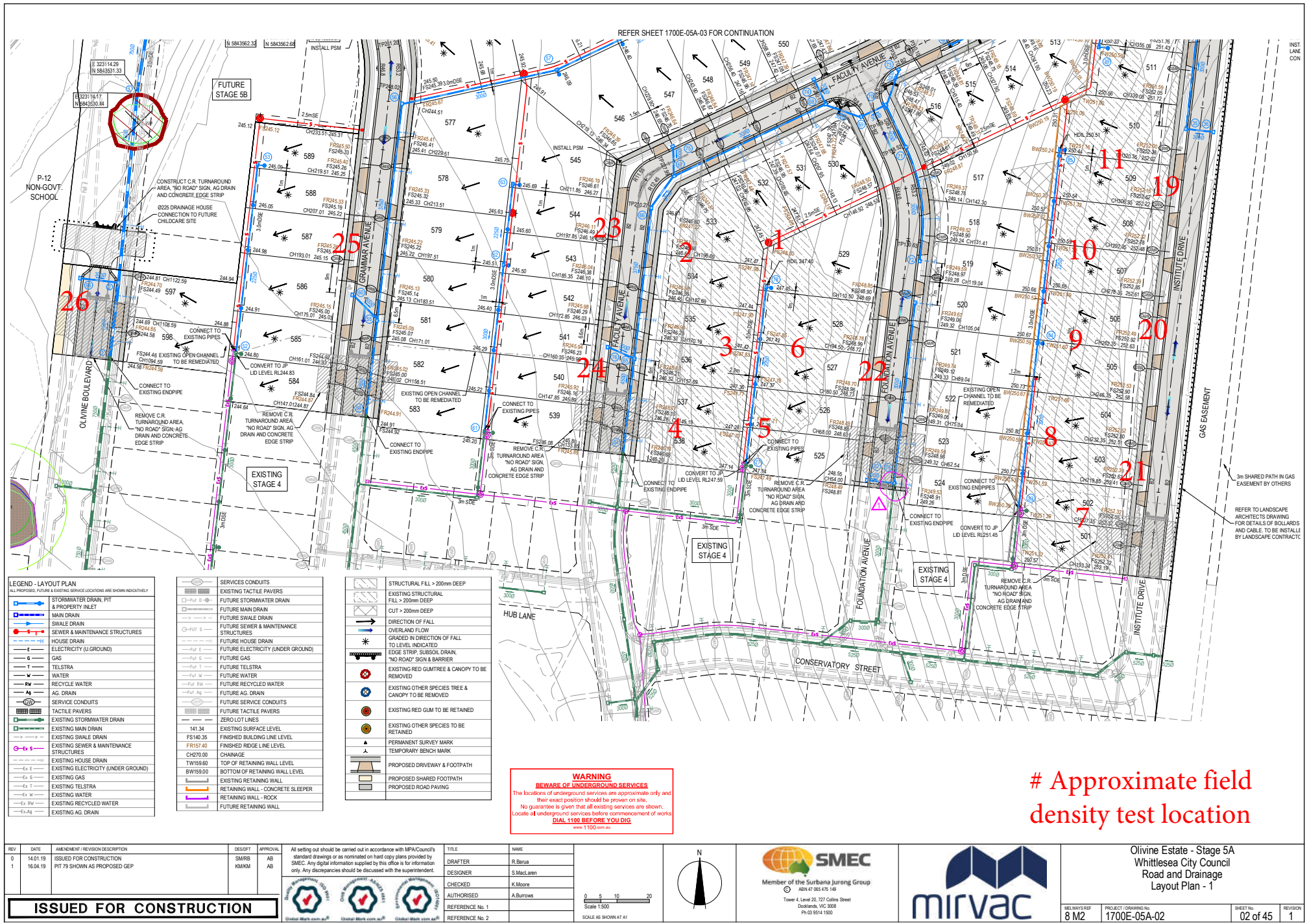
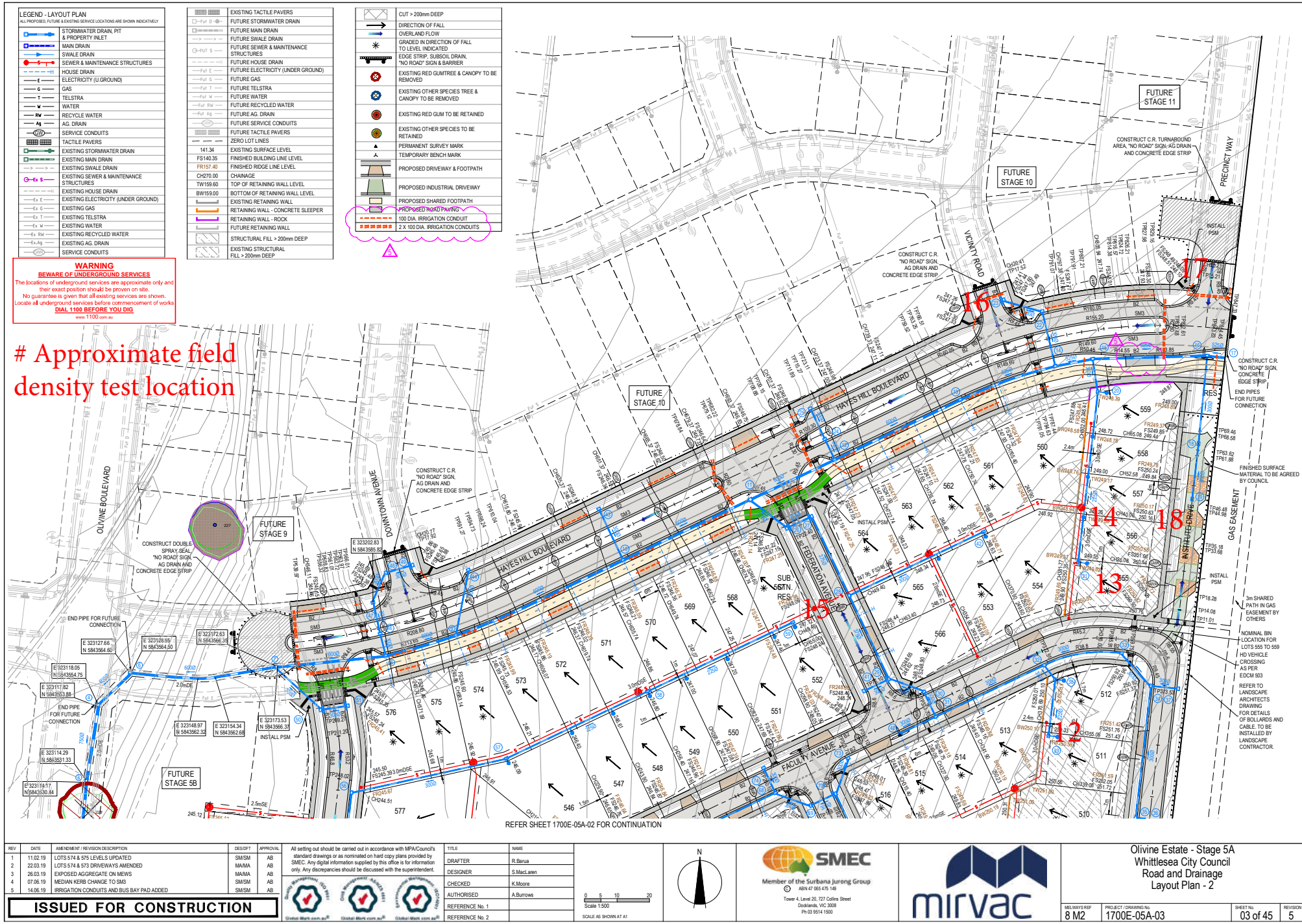


FIGURE 1 (2 of 2)





COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 19121
Report No 19121/R001
Date Issued 20/03/2019

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	06/03/19
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:15
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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	175
Field wet density t/m ³	1.85	1.83	1.81	1.82	1.80	1.81
Field moisture content %	25.6	24.7	19.0	21.7	23.2	24.4

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	1.89	1.86	1.84	1.85	1.87	1.84
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	27.5	27.0	21.5	23.5	25.0	27.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.0	98.5	98.5	98.0	96.5	98.5
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Material description

No 1 - 6 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 to ISO/IEC 17025. Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 19121
Report No 19121/R002
Date Issued 19/03/2019

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	06/03/19
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:13
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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	175
Field wet density t/m ³	1.86	1.88	1.83	1.74	1.78	1.75
Field moisture content %	23.8	22.4	25.1	17.9	19.7	17.3

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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m ³	1.88	1.88	1.85	1.75	1.82	1.77
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	26.5	24.5	27.0	20.0	21.5	19.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.0% dry	2.0% dry	2.0% dry
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Density Ratio (R_{HD})	%	99.0	100.5	99.0	100.0	98.0	99.0
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 19121
Report No 19121/R003
Date Issued 27/03/2019

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	06/03/19
Location	DONNYBROOK	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:21
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	12	-	-	-	-
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 %	20.8	21.3	-	-	-	-

Test procedure AS 1289.5.7.1

Test No	13	12	-	-	-	-
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	1.95	1.95	-	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	23.0	24.0	-	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	-	-	-	-
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Density Ratio (R_{HD})	%	96.0	96.0	-	-	-	-
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Material description

No 13 - 13 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 19121
Report No 19121/R004
Date Issued 14/11/2019

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	08/11/19
Location	DONNYBROOK	Checked by	JHF

Feature	STRUCTURAL FILL	Layer thickness	200 mm	Time: 11:28
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	15	16	17	18	19	20
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	1.82	1.80	1.79	1.80	1.80	1.81
Field moisture content %	25.4	29.7	26.6	26.3	30.1	23.6

Test procedure AS 1289.5.7.1

Test No	15	16	17	18	19	20
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	19.0	19.0	0.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m ³	1.80	1.79	1.81	1.81	1.77	1.82
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	27.0	31.5	29.0	28.5	32.5	28.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R_{HD})	%	101.0	100.0	99.5	100.0	101.5	99.5
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Material description

No 15 - 20 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 19121
Report No 19121/R005
Date Issued 03/12/2019

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	13/11/19
Location	DONNYBROOK	Checked by	JHF

Feature	STRUCTURAL FILL	Layer thickness	200 mm	Time: 14:01
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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	175
Field wet density t/m ³	1.79	1.80	1.81	1.88	1.79	1.76
Field moisture content %	29.0	29.4	28.8	31.7	31.7	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	19.0
Percent of oversize material wet	0	0	0	0	0	0
Peak Converted Wet Density t/m ³	1.81	1.82	1.82	1.89	1.80	1.77
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	31.5	31.0	31.5	29.5	32.5	33.0

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	2.5% dry	2.0% wet	0.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.5	99.0	99.5	99.5	99.5	99.5
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Material description

No 21 - 26 Clay Fill

AVRLOT HILF V1.10 MAR 13



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