



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

24th March 2022

Our Reference: 21099:NB1192

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
SMITHS LANE – STAGE 15 (CLYDE NORTH)**

Please find attached our Report No's 21099/R001 to 21099/R018 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 2021 and was completed in October 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).

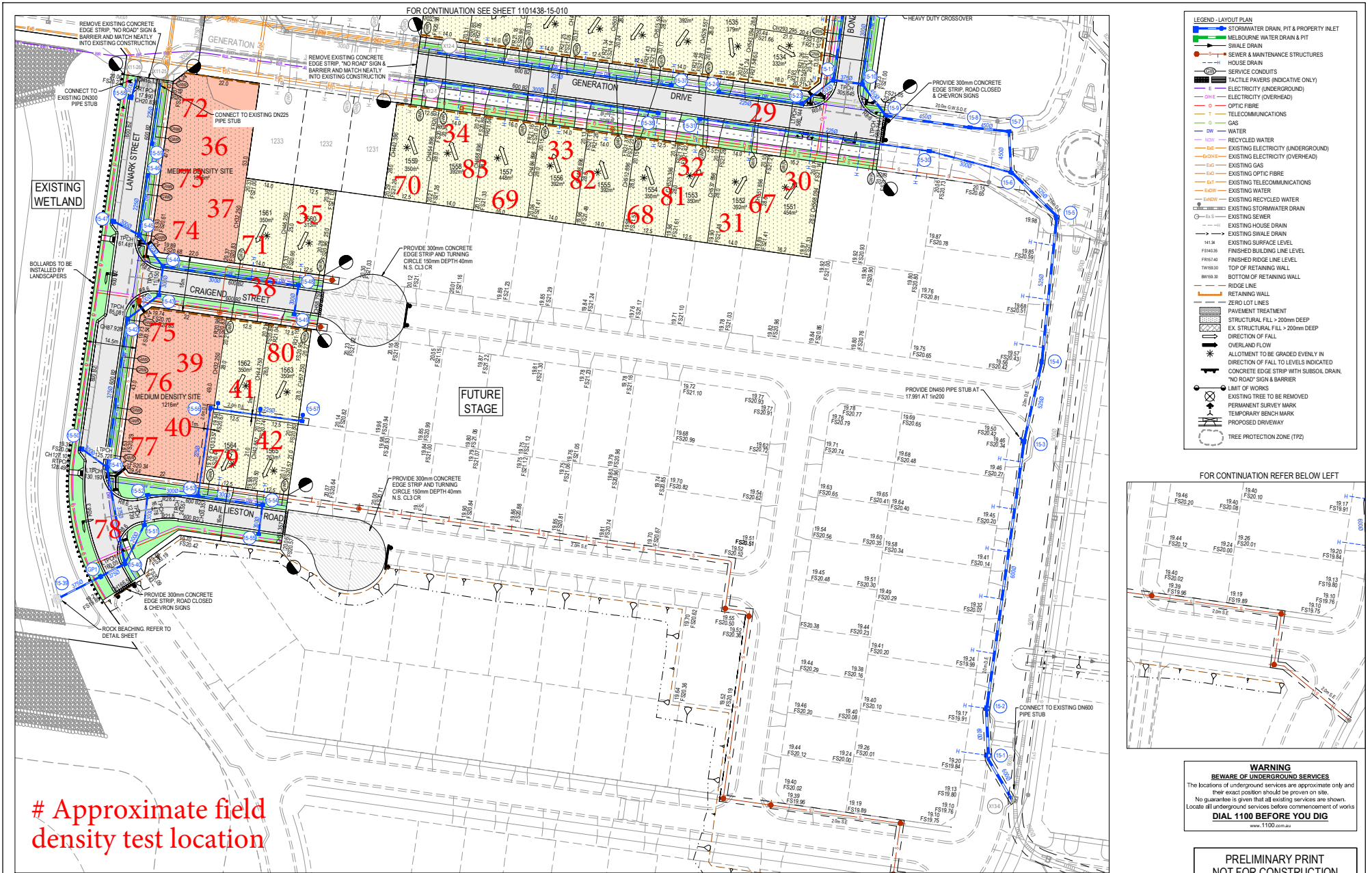
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

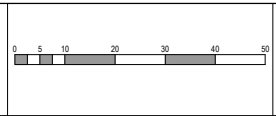
Nick Brock

FIGURE 1 (2 of 2)



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REV	DESCRIPTION	DATE	DRN	APP	REV	DESCRIPTION	DATE	DRN	APP
P2	DRINKING LINE & NUMBERS UPDATED	16/03/21	CD	LM					
P1	ISSUED FOR INFORMATION	23/03/21	CD	LM					



Designer: C. DAWSON
Date: 26.03.2021

Drawn: M.F. JAURGUE

Approved: L. MURRAY
Date: 11.04.2021

PS Number: PS839574U

BW Beveridge Williams

1 Glenferrie Road
Melburn VIC 3144
ph: 03 9524 8888
www.beveridgewilliams.com.au

Project Details: SMITHS LANE STAGE 05 CITY OF CASEY

Drawing Title: LAYOUT PLAN (SHEET 2 OF 2)

Sheet 05 of 26

Scale: 1:500 @ A1

Project Ref: 1101438 Stage No: 15 Drawing No: 011 Rev: P2

K:\Users\Gaw1101438-15\Documents\1101438-15\Stage 05\DWG\1101438-15-015-LAY.dwg



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R001
 Date Issued 13/08/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	28/04/21
Location	CLYDE NORTH	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		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	2.07	2.05	2.08	2.08	2.06	2.11
Field moisture content	%	16.5	17.4	18.9	18.2	21.8	21.3

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	2.11	2.04	2.11	2.10	2.09	2.13
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	16.5	19.5	21.5	18.5	22.5	21.0

Moisture Variation From Optimum Moisture Content	0.0%	2.0% dry	2.5% dry	0.5% dry	0.5% dry	0.5% wet
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Density Ratio (R _{HD})	%	98.0	100.5	98.5	98.5	98.5	99.0
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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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21099
Report No 21099/R002
Date Issued 06/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	29/04/21
Location	CLYDE NORTH	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		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	2.07	2.04	2.05	2.06	2.04	2.06
Field moisture content	%	21.7	24.6	24.2	22.0	23.3	23.0

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	2.12	2.15	2.09	2.11	2.10	2.08
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	21.0	22.5	22.0	20.0	21.0	22.0

Moisture Variation From Optimum Moisture Content	1.0% wet	2.0% wet	2.0% wet	2.0% wet	2.0% wet	1.0% wet
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Density Ratio (R _{HD})	%	98.0	95.0	98.5	97.5	97.0	99.5
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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 21099
 Report No 21099/R003
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	30/04/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:30
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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	2.05	2.06	2.05	2.06	2.05
Field moisture content	%	21.1	21.5	21.2	21.6	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	2.09	2.09	2.08	2.09	2.09
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.0	22.0	21.5	24.5	22.0

Moisture Variation From Optimum Moisture Content	2.0% dry	0.5% dry	0.0%	2.5% dry	0.0%	2.0% dry
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Density Ratio (R _{HD})	%	98.0	98.5	98.0	99.0	98.5	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



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R004
 Date Issued 13/08/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	05/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	19	20	21	-	-	-
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	2.12	2.11	-	-
Field moisture content	%	16.4	15.7	15.5	-	-

Test procedure AS 1289.5.7.1

Test No	19	20	21	-	-	-
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	2.16	2.14	2.15	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.0	16.5	18.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	1.0% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	98.5	99.0	98.0	-	-
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Material description

No 19 - 21 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 21099
 Report No 21099/R005
 Date Issued 15/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	06/05/21
Location	CLYDE NORTH	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	22	23	24	-	-	-
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	2.07	2.07	2.08	-	-
Field moisture content	%	16.7	19.4	17.8	-	-

Test procedure AS 1289.5.7.1

Test No	22	23	24	-	-	-
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	2.13	2.12	2.13	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	17.5	22.0	19.5	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	2.5% dry	1.5% dry	-	-	-
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Density Ratio (R _{HD})	%	97.0	97.5	97.5	-	-
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Material description

No 22 - 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 21099
 Report No 21099/R006
 Date Issued 13/08/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	13/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	25	26	27	-	-	-
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	2.00	1.96	1.96	-	-	-
Field moisture content %	15.6	14.9	15.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	25	26	27	-	-	-
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	2.09	2.02	1.99	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	17.5	17.0	17.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	95.5	97.0	98.5	-	-	-
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Material description

No 25 - 27 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 21099
 Report No 21099/R007
 Date Issued 15/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	14/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	28	29	30	-	-	-
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	2.11	2.08	2.08	-	-
Field moisture content	%	14.5	16.2	16.3	-	-

Test procedure AS 1289.5.7.1

Test No	28	29	30	-	-	-
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	2.14	2.09	2.13	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	17.0	17.5	17.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	1.5% dry	1.5% dry	-	-	-
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Density Ratio (R _{HD})	%	98.5	99.5	98.0	-	-
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Material description

No 28 - 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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21099
Report No 21099/R008
Date Issued 06/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	20/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	10:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	31	32	33	-	-	-
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	2.10	2.10	2.10	-	-
Field moisture content	%	17.3	18.8	19.0	-	-

Test procedure AS 1289.5.7.1

Test No	31	32	33	-	-	-
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	2.16	2.11	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.5	16.5	17.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% wet	2.0% wet	2.0% wet	-	-	-
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Density Ratio (R _{HD})	%	97.5	97.0	99.0	-	-
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Material description

No 31 - 33 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 21099
Report No 21099/R009
Date Issued 06/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	26/05/21
Location	CLYDE NORTH	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	34	35	36	-	-	-
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	2.08	2.06	2.07	-	-
Field moisture content	%	18.1	19.7	21.3	-	-

Test procedure AS 1289.5.7.1

Test No	34	35	36	-	-	-
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	2.13	2.10	2.12	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	16.0	17.5	19.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% wet	2.0% wet	2.0% wet	-	-	-
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Density Ratio (R _{HD})	%	98.0	98.0	97.5	-	-
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Material description

No 34 - 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 21099
 Report No 21099/R010
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	27/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	12:30
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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	2.05	2.08	2.06	-	-
Field moisture content	%	18.1	20.0	15.9	-	-

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	2.09	2.11	2.11	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.5	18.5	13.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% wet	1.5% wet	2.5% wet	-	-	-
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Density Ratio (R _{HD})	%	98.0	98.0	98.0	-	-
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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 21099
 Report No 21099/R011
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	28/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	11:30
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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	2.08	2.07	2.08	-	-
Field moisture content	%	18.8	18.7	21.7	-	-

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	2.11	2.10	2.13	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	16.5	16.0	19.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% wet	2.5% wet	2.5% wet	-	-	-
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Density Ratio (R _{HD})	%	98.5	98.5	98.0	-	-
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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 21099
 Report No 21099/R012
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	31/05/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	12:00
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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	2.03	2.01	2.06	2.07	2.05
Field moisture content	%	17.0	15.4	16.9	15.5	16.4

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	2.06	2.05	2.11	2.06	2.10
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	17.5	18.5	16.0	17.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	1.5% dry	0.5% dry	1.0% dry	2.5% dry
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Density Ratio (R _{HD})	%	98.5	98.5	98.0	100.0	98.0	98.0
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Material description

No 43 - 48 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R013
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	01/06/21
Location	CLYDE NORTH	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	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	2.04	2.02	2.02	2.03	2.02
Field moisture content	%	17.3	16.3	16.8	17.9	19.4

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	2.07	2.07	2.09	2.08	2.08
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.0	14.0	15.0	16.0	17.0

Moisture Variation From Optimum Moisture Content	2.5% wet	2.0% wet	2.0% wet	2.0% wet	2.5% wet	1.5% wet
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Density Ratio (R _{HD})	%	98.5	97.5	96.5	97.5	97.0	98.5
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Material description

No 49 - 54 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R014
 Date Issued 27/07/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SMITHS LANE - STAGE 15	Date tested	18/06/21
Location	CLYDE NORTH	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	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	mm	175	175	175	175	175
Field wet density	t/m ³	2.03	1.96	2.01	1.99	1.97
Field moisture content	%	19.9	20.1	20.6	17.5	22.8

Test procedure AS 1289.5.7.1

Test No	55	56	57	58	59	60
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	2.08	2.00	2.04	2.06	2.06
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.0	20.0	20.5	19.5	23.0

Moisture Variation From Optimum Moisture Content	1.0% wet	0.0%	0.0%	2.0% dry	0.0%	2.0% wet
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Density Ratio (R _{HD})	%	98.0	98.0	98.5	97.0	96.5	95.5
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Material description

No 55 - 60 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R015
 Date Issued 14/10/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	15/09/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	10:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	61	62	63	64	65	66
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	2.06	2.03	2.05	1.98	1.96
Field moisture content	%	17.3	17.5	16.4	14.7	14.8

Test procedure AS 1289.5.7.1

Test No	61	62	63	64	65	66
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	2.11	2.09	2.09	2.04	2.04
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.0	15.5	15.0	13.5	17.0

Moisture Variation From Optimum Moisture Content	2.0% wet	2.0% wet	1.5% wet	1.5% wet	2.0% dry	1.0% wet
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Density Ratio (R _{HD})	%	97.5	97.5	98.5	97.0	96.5	96.5
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Material description

No 61 - 66 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R016
 Date Issued 14/10/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	16/09/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	67	68	69	70	71	72
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	2.04	2.04	2.06	2.02	2.03
Field moisture content	%	17.5	18.0	16.5	18.5	17.9

Test procedure AS 1289.5.7.1

Test No	67	68	69	70	71	72
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	2.09	2.11	2.12	2.09	2.07
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.5	16.5	15.5	16.5	18.0

Moisture Variation From Optimum Moisture Content	2.0% wet	1.5% wet	1.0% wet	2.0% wet	0.5% dry	0.5% dry
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Density Ratio (R _{HD})	%	97.5	97.0	97.5	97.0	97.5	98.0
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Material description

No 67 - 72 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21099
Report No 21099/R017
Date Issued 14/10/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	17/09/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	11:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	73	74	75	76	77	78
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	2.09	2.11	1.96	1.96	2.11
Field moisture content	%	17.4	13.4	17.1	15.8	17.4

Test procedure AS 1289.5.7.1

Test No	73	74	75	76	77	78
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	2.14	2.18	2.01	2.03	2.16
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	17.0	11.5	15.5	14.0	16.0

Moisture Variation From Optimum Moisture Content	0.5% wet	2.0% wet	1.5% wet	2.0% wet	1.5% wet	1.5% wet
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Density Ratio (R _{HD})	%	98.0	97.0	98.0	96.5	97.5	99.0
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Material description

No 73 - 78 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21099
 Report No 21099/R018
 Date Issued 27/11/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 15	Date tested	20/10/21
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	79	80	81	82	83	-	
Location	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	2.00	2.01	2.02	2.00	1.99	-
Field moisture content	%	16.0	15.4	13.6	15.6	18.6	-

Test procedure AS 1289.5.7.1

Test No	79	80	81	82	83	-	
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	2.08	2.06	2.06	2.02	2.06	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	16.0	14.5	16.0	16.5	19.0	-

Moisture Variation From Optimum Moisture Content	0.0%	0.5% wet	2.0% dry	1.0% 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})	%	96.5	97.0	98.0	99.0	96.5	-
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Material description

No 79 - 83 Clay Fill

AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry