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

3rd September 2024

Our Reference: 24279:NB1981

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
SMITHS LANE – STAGE 29 (CLYDE NORTH)

Please find attached our Report No's 24279/R001 to 24279/R008 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 May 2024 and was completed in June 2024.

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).

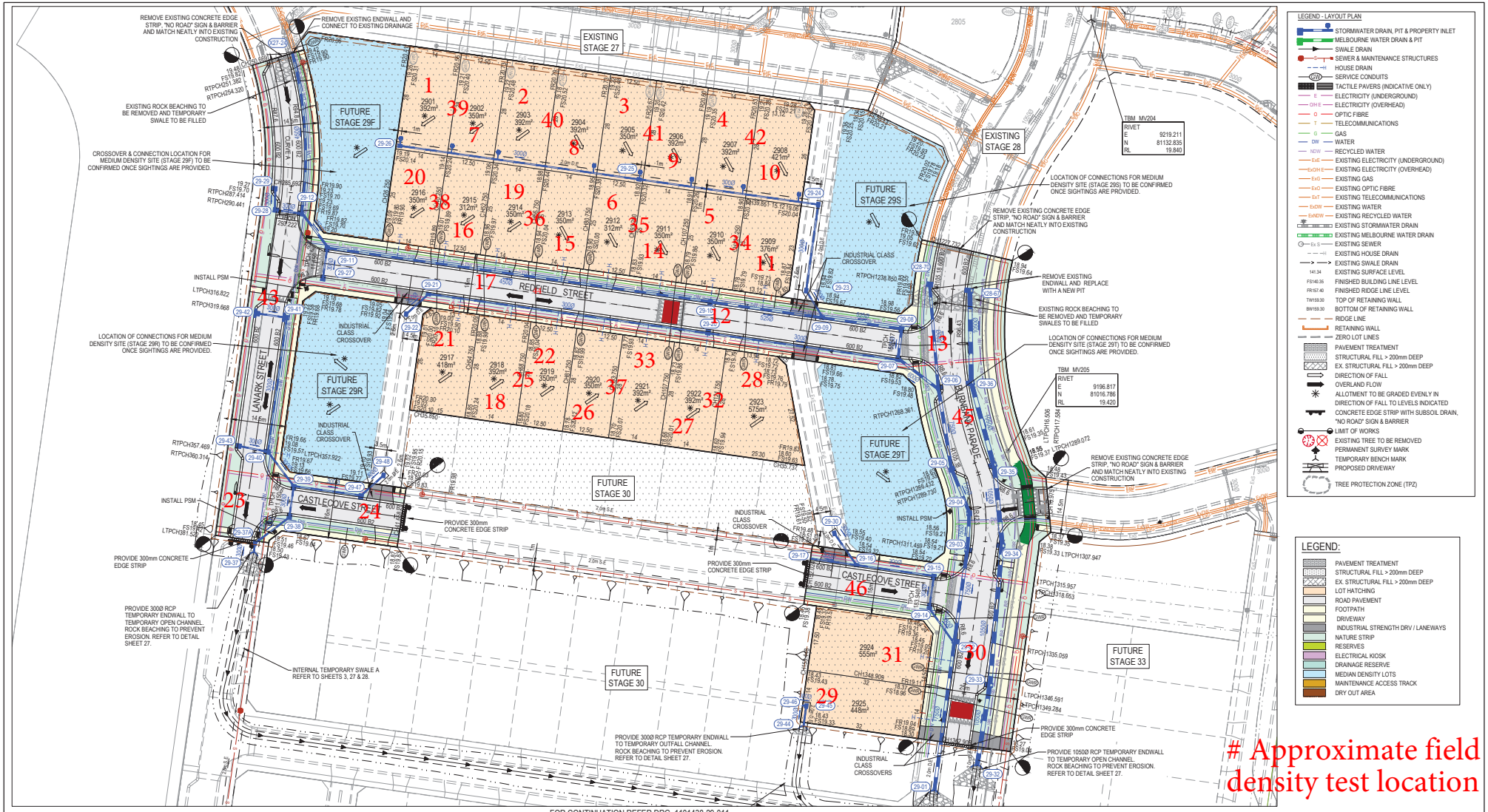
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



Approximate field density test location

FOR CONTINUATION REFER DRG. 1101438-29-011

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
LANARK STREET	14.50	5.10/7.20	6.00/8.10	6.30/8.40	600 B2	600 B2	2.15	4.25
CASTLECOVE STREET (WEST)	16.00	6.40	7.30	7.60	600 B2	600 B2	4.20	4.50
CASTLECOVE STREET (EAST)	16.00	6.40	7.30	7.60	600 B2	600 B2	4.20	4.50
REDFIELD STREET	16.00	6.40	7.30	7.60	600 B2	600 B2	4.50	4.20
BURNBANK PARADE	25.00	6.40/8.35	7.30/9.25	7.60/9.55	600 B2	600 B2	4.50/6.85	8.90/10.85
ZALE ROAD	14.50	6.40	7.30	7.60	600 B2	600 B2	2.70	4.50

SERVICE OFFSET TABLE

Location	Gas		ND - Water		Water		Electricity		Telecommunication		Sewer		Irrigation	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
LANARK STREET	E	2.00	E	2.45	E	2.95	W	1.20	W	0.85	E	1.3	-	-
CASTLECOVE STREET (WEST)	S	2.25	S	2.70	S	3.20	N	2.60	N	1.85	S	1.0	-	-
CASTLECOVE STREET (EAST)	S	2.25	S	2.70	S	3.20	N	2.60	N	1.85	N/S	1.0/1.0	-	-
REDFIELD STREET	N	2.25	N	2.70	N	3.20	S	2.60	S	1.85	N/S	1.0/1.0	-	-
BURNBANK PARADE	W	2.25	W	2.70	W	3.20	E	2.60	E	1.85	E/W	1.0, Ex.5.0/Ex.1.0	E	6.70
ZALE ROAD	S	2.25	S	2.70	S	3.20	N	1.25	N	0.50	S	Ex.1.0	-	-

NOTE: STREET TREES ARE TO BE PLANTED IN THE CENTRE OF ALL NATURE STRIPS

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
BEFORE YOU DIG
www.byda.com.au

PRELIMINARY PRINT
NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRN.	APP.
P1	ISSUED FOR INFORMATION	01.12.23	MFJ	SY

SMITHS LANE
CLYDE NORTH

SCALE 1:500 AT A1 SIZE

Designed	K.LIM WAN
Date	24.11.2023
Drawn	M.F. JAURIGUE
Checked	L.MURRAY
Date	29.11.2023
Approved	S.YOUNG
Reg. No.	PS009569I
Date	30.11.2023
PS Number	PS921349U

Beveridge Williams
Development & Infrastructure Consultants
1 Glenferrie Road
Malvern VIC 3144
ph: 03 9524 8888
www.beveridgewilliams.com.au

Project Details: SMITHS LANE
STAGE 29
CITY OF CASEY

Drawing Title: LAYOUT PLAN

Sheet 05 of 30
Scale 1:500 @ A1

Project Ref	Stage No	Drawing No	Rev
1101438	29	010	P1

K:\Jobs Data\1101438 110 Smiths Lane, Clyde (MIRVAC)_Eng\Stage 29\Drawings\1101438-29-010-LAY.dwg

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	24279
		Report No	24279/R001
		Date Issued	08/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	SMITHS LANE - STAGE 29	Date tested	31/05/24
Location	CLYDE NORTH	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	11:12

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/m³*	1.91	1.88	1.90	2.03	1.98	1.99
Field moisture content	*%*	20.4	19.7	20.5	14.4	23.7	18.9

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/m³*	1.94	1.90	1.94	2.06	2.02	1.99
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.5	20.0	23.0	16.5	25.0	19.5

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

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**	**99.0**	**98.0**	**98.5**	**98.5**	**100.5**

Material description

No 1 - 6 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24279
		Report No	24279/R002
		Date Issued	08/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	SMITHS LANE - STAGE 29	*Date tested*	04/06/24
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:02

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/m³*	2.05	1.95	2.06	2.07	2.07	2.08
Field moisture content	*%*	17.7	15.4	19.9	22.5	23.4	19.8

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/m³*	2.08	1.96	2.08	2.10	2.09	2.08
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.0	17.5	22.0	24.5	25.5	22.5

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

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**	**99.0**	**98.5**	**99.0**	**99.5**

Material description

No 7 - 12 Clay Fill

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	24279
		Report No	24279/R003
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	SMITHS LANE - STAGE 29	*Date tested*	06/06/24
Location	CLYDE NORTH	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	08:36

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*	2.12	2.07	2.04	1.89	1.96	2.04
Field moisture content	*%*	20.9	21.6	23.6	17.7	19.2	17.6

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	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.11	2.11	2.04	1.97	1.95	2.09
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	21.5	23.5	17.0	19.5	17.5

Moisture Variation From Optimum Moisture Content	0.5% wet	0.0%	0.0%	0.5% wet	0.0%	0.0%

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})	*%*	**100.0**	**98.0**	**100.0**	**96.5**	**100.5**	**97.5**

Material description

No 13 - 18 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24279
		Report No	24279/R004
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	SMITHS LANE - STAGE 29	*Date tested*	07/06/24
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 09:16

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/m³*	1.99	1.86	2.02	2.11	2.13	2.24
Field moisture content	*%*	15.2	15.1	16.8	16.0	17.4	16.9

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/m³*	2.03	1.90	2.06	2.15	2.16	2.28
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	16.0	15.5	17.0	16.5	17.5	17.5

Moisture Variation From Optimum Moisture Content		0.5% dry	0.0%	0.5% dry	0.5% dry	0.5% dry	0.5% dry

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**	**98.5**	**98.0**	**98.5**	**98.5**

Material description

No 19 - 24 Clay Fill

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	24279
		Report No	24279/R005
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	SMITHS LANE - STAGE 29	*Date tested*	17/06/24
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:01

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	175
Field wet density	*t/m³*	1.87	1.99	1.90	1.98	1.89	1.89
Field moisture content	*%*	18.8	19.3	19.2	17.3	16.4	20.1

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	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	1.94	1.99	1.99	1.98	1.95	1.89
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	18.0	18.0	19.0	17.0	16.5	20.0

Moisture Variation From Optimum Moisture Content		0.5% wet	1.0% wet	0.0%	0.5% wet	0.0%	0.0%

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**	**99.5**	**95.5**	**100.0**	**97.0**	**100.0**

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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24279
		Report No	24279/R006
		Date Issued	27/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	SMITHS LANE - STAGE 29	*Date tested*	18/06/24
Location	CLYDE NORTH	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	10:26

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/m³*	2.03	2.07	1.99	2.02	2.06	2.11
Field moisture content	*%*	21.4	20.3	19.4	18.3	20.1	20.5

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/m³*	2.05	2.12	2.04	2.05	2.07	2.15
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.0	21.5	21.0	20.5	22.0	22.5

Moisture Variation From Optimum Moisture Content		0.5% dry	1.0% dry	1.5% dry	2.0% dry	2.0% dry	2.0% dry
Density Ratio (R_{HD})	*%*	**99.0**	**97.5**	**97.5**	**98.5**	**99.0**	**98.5**

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Material description

No 31 - 36 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24279
		Report No	24279/R007
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	SMITHS LANE - STAGE 29	*Date tested*	20/06/24
Location	CLYDE NORTH	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	09:43

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	175
Field wet density	*t/m³*	2.04	2.01	1.98	2.04	1.96	1.98
Field moisture content	*%*	19.0	21.0	18.9	18.9	18.3	19.9

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	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.05	2.07	2.01	2.09	1.99	2.03
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.0	23.5	19.5	21.0	18.5	22.5

Moisture Variation From Optimum Moisture Content	0.0%	2.0% dry	0.5% dry	2.0% dry	0.5% dry	2.5% dry

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})	*%*	**99.5**	**97.5**	**99.0**	**98.0**	**98.5**	**97.5**

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

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	24279
		Report No	24279/R008
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	CV
Project	SMITHS LANE - STAGE 29	Date tested	28/06/24
Location	CLYDE NORTH	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	10:45

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**43**	**44**	**45**	**46**	**-**	**-**
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/m³	2.10	2.09	2.11	2.08	-	-
Field moisture content	%	22.0	21.2	23.1	22.1	-	-

Test procedure AS 1289.5.7.1

Test No		43	44	45	46	-	-
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/m³	2.11	2.09	2.10	2.12	-	-
Adjusted Peak Converted Wet Density	t/m³	-	-	-	-	-	-
Optimum Moisture Content	%	21.5	20.5	23.0	21.0	-	-

Moisture Variation From Optimum Moisture Content	0.0%	1.0% wet	0.0%	1.0% wet	-	-

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})	**%**	**99.5**	**100.0**	**100.5**	**98.5**	**-**	**-**

Material description

No 43 - 46 Clay Fill

Approved Signatory : Justin Fry