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

17th August 2023

Our Reference: 23657:NB1639

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
105 SMITHS LANE – STAGE 39 (CLYDE NORTH)

Please find attached our Report No's 23657/R001 to 23657/R003 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 was performed in August 2023.

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).

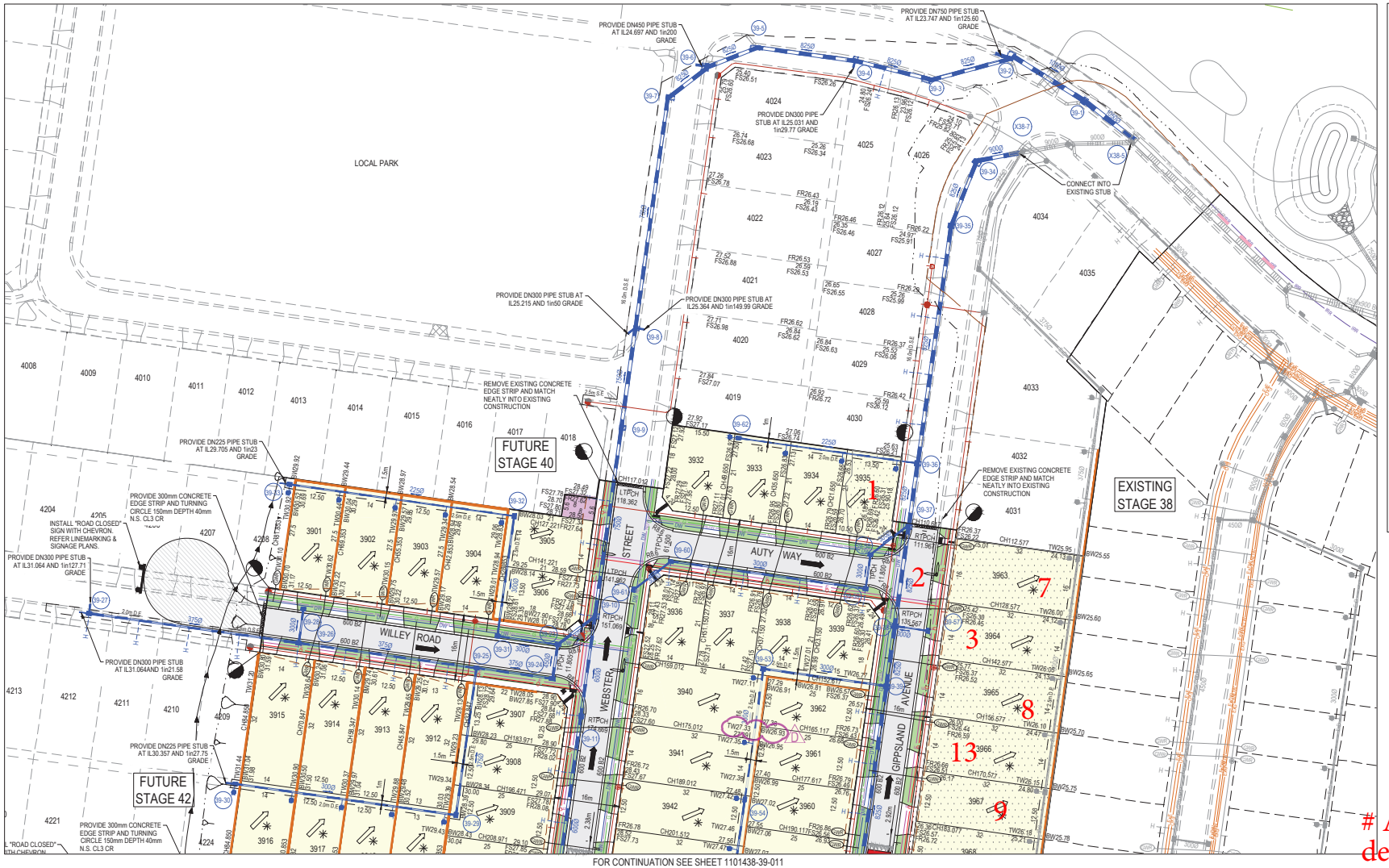
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1 (1 of 2)



LEGEND - LAYOUT PLAN

- STORMWATER DRAIN, PIT & PROPERTY INLET
- MELBOURNE WATER DRAIN & PIT
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS (INDICATIVE ONLY)
- ELECTRICITY (UNDERGROUND)
- ELECTRICITY (OVERHEAD)
- OPTIC FIBRE
- TELECOMMUNICATIONS
- GAS
- WATER
- RECYCLED WATER
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
- EXISTING GAS
- EXISTING OPTIC FIBRE
- EXISTING TELECOMMUNICATIONS
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING STORMWATER DRAIN
- EXISTING MELBOURNE WATER DRAIN
- EXISTING SEWER
- EXISTING HOUSE DRAIN
- EXISTING SWALE DRAIN
- EXISTING SURFACE LEVEL
- FINISHED BUILDING LINE LEVEL
- FINISHED RIDGE LINE LEVEL
- TOP OF RETAINING WALL
- BOTTOM OF RETAINING WALL
- RIDGE LINE
- RETAINING WALL
- ZERO LOT LINES
- PAVEMENT TREATMENT
- STRUCTURAL FILL > 200mm DEEP
- EX. STRUCTURAL FILL > 200mm DEEP
- DIRECTION OF FALL
- OVERLAND FLOW
- ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FALL TO LEVELS INDICATED
- CONCRETE EDGE STRIP WITH SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
- LIMIT OF WORKS
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY
- TREE PROTECTION ZONE (TPZ)

Approximate field density test location

ROAD LAYOUT TABLE

ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)			VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NORTH/WEST	SOUTH/EAST
WILLEY ROAD	16.00	6.40	7.30	7.60	4.35	4.05
AUTY WAY	16.00	6.40	7.30	7.60	4.35	4.05
GIPPSLAND AVENUE	16.00/14.50	6.40	7.30	7.60	4.35	4.05/2.55
MORROW STREET	14.50	6.40	7.30	7.60	4.35	2.55
WEBSTER STREET	16.00	6.40	7.30	7.60	4.05	4.35
MARQUESS CRESCENT	16.00	6.40	7.30	7.60	4.35	4.05
GULING RISE	16.00	6.40	7.30	7.60	4.35	4.05

NOTE: DIMENSIONS IN PARENTHESES INCLUDES PARKING LANE

SERVICE OFFSET TABLE

Location	Gas		ND - Water		Water		Electricity		Telecommunication		Sewer	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
WILLEY ROAD	N	2.25	N	2.70	N	3.20	S	2.60	S	1.85	N/S	1.00
AUTY WAY	N	2.25	N	2.70	N	3.20	S	2.60	S	1.85	N/S	1.00
GIPPSLAND AVENUE	W	1.90	W	2.35	W	2.85	E	2.60/1.25	E	1.85/.050	E/W	1.00
MORROW STREET	N	1.90	N	2.35	N	2.85	S	1.25	S	0.50	N/S	1.00
WEBSTER STREET	E	2.25	E	2.70	E	3.20	W	2.60	W	1.85	E/W	1.00
MARQUESS CRESCENT	N	2.25	N	2.70	N	3.20	S	2.60	S	1.85	N/S	1.00
GULING RISE	N	2.25	N	2.70	N	3.20	S	2.60	S	1.85	N/S	**1.00**

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

FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRN.	APP.
D	RETAINING WALL LEVELS AMENDED	19.06.23	B.P	L.M
C	TOP OF WALL LEVELS AMENDED ALONG STAGE 38 BOUNDARY	16.03.23	B.P	L.M
B	STUB LEVEL & GRADES AMENDED FOR PITS 39-20, 39-27 & 39-27	12.09.22	B.P	L.M
A	ISSUED FOR CONSTRUCTION	28.08.22	B.P	L.M

SMITHS LANE
CLYDE NORTH

SCALE 1:500 AT A1 SIZE

Designed	B. PAPPALARDO
Date	31.01.2022
Drawn	N. TABUENA
Approved	L.MURRAY
Date	31.01.2022
PS Number	PS904411P

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

Project Details	SMITHS LANE STAGE 39 CITY OF CASEY, R5833
Drawing Title	LAYOUT PLAN SHEET 1 OF 2

Sheet 06 of 36
Scale 1:500 @ A1

Project Ref	Stage No	Drawing No	Rev
1101438	39	010	D

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FIGURE 1 (2 of 2)

LEGEND - LAYOUT PLAN

- STORMWATER DRAIN, PIT & PROPERTY INLET
- MELBOURNE WATER DRAIN & PIT
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS (INDICATIVE ONLY)
- ELECTRICITY (UNDERGROUND)
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- RECYCLED WATER
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
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- EXISTING OPTIC FIBRE
- EXISTING TELECOMMUNICATIONS
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING STORMWATER DRAIN
- EXISTING MELBOURNE WATER DRAIN
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DIAL 1100 BEFORE YOU DIG
www.1100.com.au

FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRN.	APP.
E	RETAINING WALL LEVELS AMENDED	19.06.23	B.P	L.M
D	LOT 3989 CROSSOVER AMENDED	18.04.23	B.P	L.M
C	TOP OF WALL LEVELS AMENDED ALONG STAGE 38 BOUNDARY	16.03.23	B.P	L.M
B	STUB LEVEL & GRADES AMENDED FOR PITS 39-20, 39-27 & 39-27	12.09.22	B.P	L.M
A	ISSUED FOR CONSTRUCTION	28.08.22	B.P	L.M

SMITHS LANE
CLYDE NORTH

0 5 10 20 30 40
SCALE 1:500 AT A1 SIZE

Designed B. PAPPALARDO 31.01.2022
Drawn N. TABUENA
Approved L.MURRAY 31.01.2022
PS Number PS904411P

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Project Details: SMITHS LANE
STAGE 39
CITY OF CASEY, R5833

Drawing Title: LAYOUT PLAN
SHEET 2 OF 2

Sheet 07 of 36
Scale 1:500 @ A1

Project Ref	Stage No	Drawing No	Rev
1101438	39	011	E

K:\Jobs Data\1101438 110 Smiths Lane, Clyde (MIRVAC)_Eng\Stage 39\Drawings\1101438-39-010-LAY.dwg

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	23657
		Report No	23657/R001
		Date Issued	17/08/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	105 SMITHS LANE - STAGE 39	*Date tested*	11/08/23
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:00

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*	1.99	1.98	1.98	1.98	1.98	1.98
Field moisture content	*%*	26.0	25.9	23.6	25.4	24.0	23.0

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*	2.02	2.00	2.00	2.03	2.00	2.02
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	28.5	28.0	26.0	27.5	26.5	25.5

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

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**	**98.5**	**97.5**	**99.0**	**98.5**

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	23657
		Report No	23657/R002
		Date Issued	17/08/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	105 SMITHS LANE - STAGE 39	*Date tested*	14/08/23
Location	CLYDE NORTH	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	10:30

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*	1.96	1.98	1.96	1.97	2.00	1.99
Field moisture content	*%*	24.1	23.8	24.3	23.1	24.1	24.2

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*	2.00	2.00	1.99	1.98	2.03	2.00
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	26.5	25.5	26.0	23.5	26.5	26.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	1.5% dry	0.5% 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})	*%*	**98.0**	**99.0**	**98.5**	**99.0**	**98.5**	**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	23657
		Report No	23657/R003
		Date Issued	17/08/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	105 SMITHS LANE - STAGE 39	*Date tested*	15/08/23
Location	CLYDE NORTH	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	13:30

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*	1.98	2.00	1.99	1.96	1.97	1.96
Field moisture content	*%*	19.8	22.7	21.8	23.5	23.1	21.6

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*	1.99	2.05	1.99	1.99	1.99	1.99
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.0	25.5	24.0	26.0	25.5	23.5

Moisture Variation From Optimum Moisture Content		2.0% dry	2.5% dry	2.0% dry	2.0% dry	2.0% dry	2.0% 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**	**100.0**	**98.5**	**99.0**	**98.5**

Material description

No 13 - 18 Clay Fill

Approved Signatory : Justin Fry