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

16th September 2022

Our Reference: 22206:NB1352

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RATHDOWNE – STAGE 12 (WOLLERT)

Please find attached our Report No's 22206/R001 to 22206/R004 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 April 2022 and was completed in May 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).

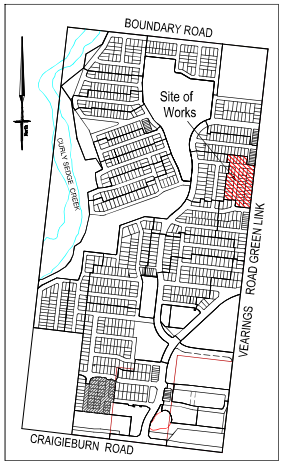
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



LOCALITY PLAN

MELWAYS: 388 C-10
NOT TO SCALE

SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	ROAD RESERVE	POTABLE WATER		NON-POTABLE WATER		GAS		ELECTRICITY				TELECOMUNICATIONS		BOK	
		SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	POLE		U/G CABLE		SIDE	OFFSET	SIDE	SIDE
								SIDE	OFFSET	SIDE	OFFSET				
ANAMUDI ROAD	16m	E	3.20	E	2.70	E	2.20		1.80*	W	2.60	W	1.80	4.35 E	4.05 W
STONEVIEW PLACE	16m	N	3.20	N	2.70	N	2.20		1.80*	S	2.60	S	1.80	4.35 N	4.05 S

1. TELSTRA AND ELECTRICITY CABLES ARE TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRAWINGS.
2. GAS AND WATER MAINS ARE TO BE CONSTRUCTED IN A COMMON TRENCH
3. * DENOTES OFFSET FROM BACK OF KERB

DRAWING INDEX

Sheet No.	Version	Description
1	B	LAYOUT PLAN & SERVICE OFFSETS TABLE
2	A	GENERAL NOTES, PAVEMENT COMPOSITIONS & TYPICAL CROSS SECTIONS
3	A	ROAD LONGITUDINAL SECTION & CROSS SECTIONS - ANAMUDI ROAD
4	A	ROAD LONGITUDINAL SECTION & CROSS SECTIONS - STONEVIEW PLACE
5	A	INTERSECTION DETAILS
6	B	DRAINAGE LONGITUDINAL SECTIONS & PIT SCHEDULE
7	A	SIGNAGE & LINEMARKING PLAN

Approximate field density test location

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.

ATTENTION TO CONTRACTOR

1. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.
2. Contractor to ensure that the site is pegged by a licenced surveyor and or set out checked by a licenced surveyor prior to underground infrastructure being installed.
3. Where concrete works abut a sewer access chamber surround or similar structure, an expansion joint of approved material shall be provided between the two faces.

SYMBOL LEGEND

Drains
Sewer < 300Ø
Sewer ≥ 300Ø
Water (DW)
Water (NDW)
House Drain
Property Inlet
Street Sign
PSM
Rock Ret Wall
Sleeper Ret Wall
Conduits 50mm
Conduits 100mm
Street Tree without/with Passive Irrigation (Refer Detail)
Ex Drains
Ex Water DW/NDW
Ex Sewer/Gas
Ex Elect/Comm
Ex/Natural/FS Level
FS @ Building Line
Top/Toe of Batter
Top Ret. Wall Level
100yr Flood Level
Fill Proposed (<0.3m/≥0.3m)
Cut Proposed
Asphalt Surface Prop
Concrete Surface Prop (Paths/Driveways/Slabs)
Tree To Be Removed
Tree To Be Retained with Tree Protection Zone (TPZ)

LAYOUT PLAN
SCALE 1:500

NORTH

AMENDMENTS			
VER	DATE	REMARKS	
B	13-12-21	DRAINAGE PIPE SIZE AMENDED	
A	22-10-21	ISSUED FOR CONSTRUCTION	

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388 C-10
SURVEY	BPD
DESIGN	MLA.
DRAWN	MLA.
CHECKED	

RATHDOWNE ESTATE
STAGE 12
LAYOUT PLAN & SERVICE OFFSET TABLE

SCALE	AS SHOWN	DATUM	AHD	DATE	JUN '21

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 5/12
SHEET 1 OF 12 B

Plotted: Dec 13, 2021 - 3:36pm

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22206
		Report No	22206/R001
		Date Issued	27/04/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 12	*Date tested*	10/04/22
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:03

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*	1.95	1.85	1.89	1.85	1.92	1.91
Field moisture content	*%*	18.0	19.6	22.7	18.4	17.4	18.1

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*	2.00	1.92	1.93	1.90	1.98	1.96
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	22.5	25.5	20.5	20.0	21.0

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% 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})	*%*	**97.5**	**96.5**	**98.0**	**98.0**	**97.0**	**97.5**

Material description

No 1 - 6 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	22206
		Report No	22206/R002
		Date Issued	27/04/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 12	*Date tested*	11/04/22
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:02

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*	1.91	1.95	1.94	1.94	1.95	1.93
Field moisture content	*%*	18.8	18.6	21.0	18.7	21.6	19.2

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*	1.93	1.99	1.99	1.98	1.97	1.96
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	21.5	21.0	23.5	21.0	23.5	22.0

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.5% dry	2.5% 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})	*%*	**99.0**	**97.5**	**97.5**	**98.0**	**99.0**	**98.5**

Material description

No 7 - 12 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	22206
		Report No	22206/R003
		Date Issued	23/05/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 12	*Date tested*	27/04/22
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 08:35

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*	1.99	1.94	1.95	1.95	1.93	1.93
Field moisture content	*%*	13.6	27.0	26.8	22.3	26.1	25.9

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*	2.03	1.97	2.00	2.00	1.99	1.99
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	16.0	29.5	29.5	24.5	28.5	29.0

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% 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})	*%*	**98.5**	**99.0**	**97.5**	**97.5**	**97.5**	**97.0**

Material description

No 13 - 18 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22206
		Report No	22206/R004
		Date Issued	09/06/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 12	*Date tested*	03/05/22
Location	WOLLERT	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	11:31

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*	1.92	1.95	1.94	1.96	1.95	1.93
Field moisture content	*%*	21.9	22.7	20.7	20.0	23.0	19.2

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*	1.95	2.01	2.00	1.98	2.00	1.95
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	24.5	25.0	23.0	22.5	25.5	21.5

Moisture Variation From Optimum Moisture Content		2.5% dry	2.0% dry	2.5% dry	2.5% 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**	**97.0**	**97.0**	**99.0**	**97.0**	**99.5**

Material description

No 19 - 24 Clay Fill

Approved Signatory : Justin Fry