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

12th January 2023

Our Reference: 22042:NB1433

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RATHDOWNE – STAGE 13 (WOLLERT)

Please find attached our Report No's 22042/R001 to 22042/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).

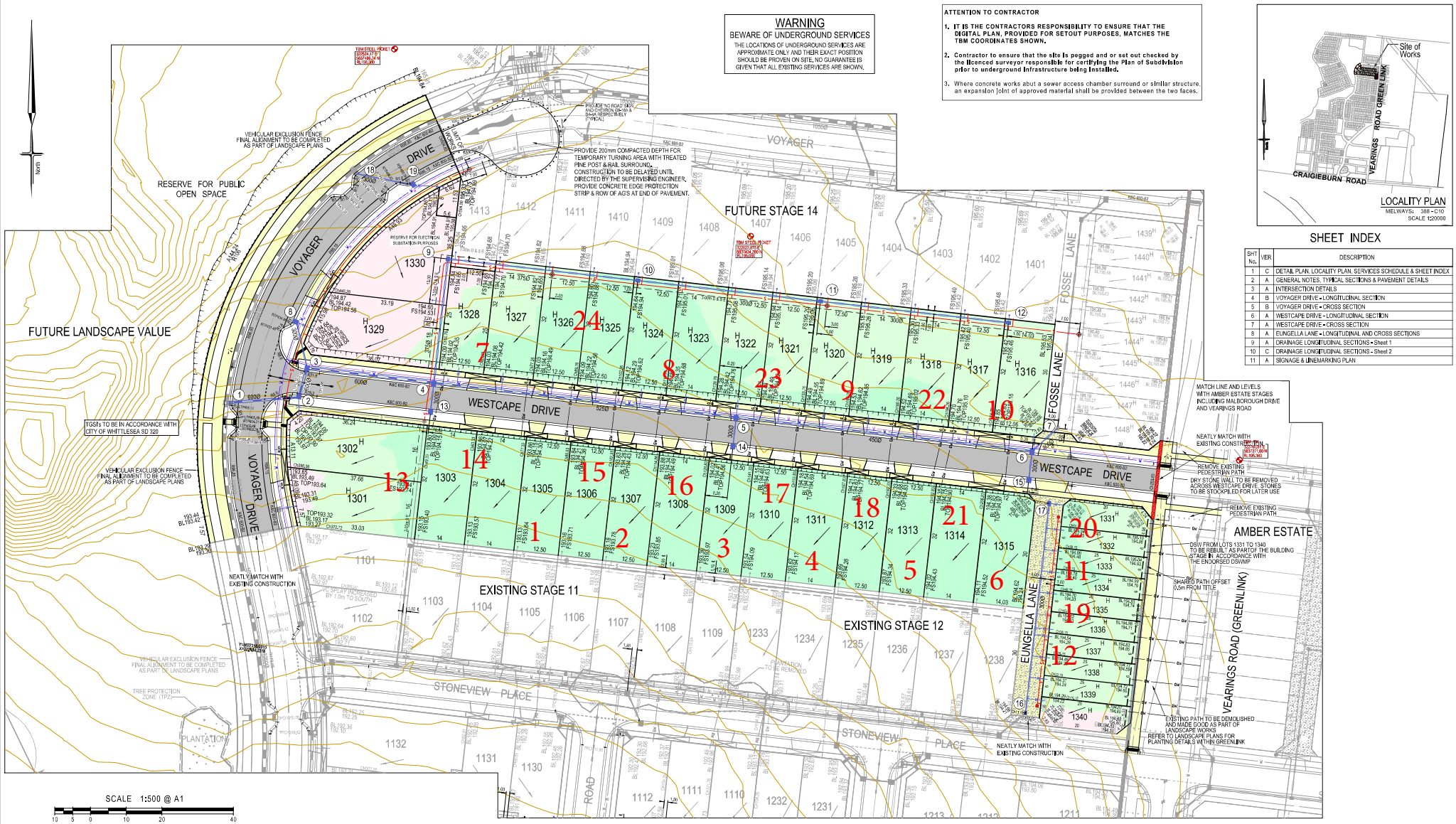
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



SHT No.	VER	DESCRIPTION
1	C	DETAIL PLAN, LOCALITY PLAN, SERVICES SCHEDULE & SHEET INDEX
2	A	GENERAL NOTES, TYPICAL SECTIONS & PAVEMENT DETAILS
3	A	INTERSECTION DETAILS
4	B	VOYAGER DRIVE - LONGITUDINAL SECTION
5	B	VOYAGER DRIVE - CROSS SECTION
6	A	WESTCAPE DRIVE - LONGITUDINAL SECTION
7	A	WESTCAPE DRIVE - CROSS SECTION
8	A	EUNGELLA LANE - LONGITUDINAL AND CROSS SECTIONS
9	A	DRAINAGE LONGITUDINAL SECTIONS - Sheet 1
10	C	DRAINAGE LONGITUDINAL SECTIONS - Sheet 2
11	A	SIGNAGE & LINEMARKING PLAN

SERVICES OFFSETS AND LOCATIONS

Location	Gas	Water		Communications		Electricity		BOK	Road Width	Joint Trenching	Street Classification	Street Trees
		NDW	DW	Cables	Pits	Cables	Poles					
WESTCAPE	2.10N	2.60N	3.10N	1.80S	1.80N/S	2.60S	1.00 BOK	4.05S,4.35N	16	G/W,FTTH/E	LEVEL 1	CENTRE OF NS
EUNGELLA/FOSSE							1.00 BOK		8		LEVEL 1	CENTRE OF NS
VOYAGER	2.25E	2.70E	3.20E	1.80W	1.80E/W	2.60W	1.00 BOK	4.55E,8.55W	25	G/W,FTTH/E	COLLECTOR	CENTRE OF NS
VEARINGS	2.25E	2.70E	3.20E	1.80W	1.80E/W	2.60W	1.00 BOK	4.55E,8.55W	25	G/W,FTTH/E	COLLECTOR	CENTRE OF NS

NOTE: a) At the court bowl where water and gas mains pass, the watermain offset is to be increased by 0.5 metres.
b) * Indicates offsets from back of kerb where services do not run parallel to title boundary.
c) ^ Indicates Communication pits placed within concrete footpath.

SYMBOL LEGEND

Approximate field density test location

VER	DATE	REMARKS
C	08/03/22	SHEETS 1,4,5 & 10 UPDATED
B	21/01/22	DRAINAGE LINE 16- 17 UPDATED
A	16/12/21	ISSUE 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. 103-C-10
SURVEY BPD
DESIGN RGW
DRAWN GL
CHECKED

RATHDOWNE ESTATE
STAGE 13

MUNICIPALITY WHITTLESEA
REFERENCE 9365 E/13

SCALE AS SHOWN DATUM AHD DATE AUG'21
SHEET 1 OF 11 C

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22042
		Report No	22042/R001
		Date Issued	10/05/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 13	*Date tested*	07/04/22
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		**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*	1.96	1.95	2.03	2.07	1.93	1.94
Field moisture content	*%*	22.7	20.5	18.6	17.6	17.0	17.9

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*	2.03	1.99	2.04	2.10	1.99	2.00
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	23.5	23.0	20.5	20.0	18.0	17.0

Moisture Variation From Optimum Moisture Content		1.0% dry	2.5% dry	2.0% dry	2.0% dry	1.0% dry	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})	*%*	**97.0**	**98.0**	**99.5**	**99.0**	**97.0**	**97.0**

Material description

No 1 - 6 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22042
		Report No	22042/R002
		Date Issued	23/05/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 13	*Date tested*	11/04/22
Location	WOLLERT	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	15:06

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*	2.02	2.07	2.05	2.00	2.03	2.08
Field moisture content	*%*	19.7	22.0	22.3	20.2	20.6	23.1

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*	2.07	2.07	2.07	2.04	2.13	2.13
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.5	22.0	25.0	20.5	23.0	25.5

Moisture Variation From Optimum Moisture Content		2.5% dry	0.0%	2.5% dry	0.0%	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})	*%*	**97.5**	**100.0**	**99.5**	**98.0**	**95.5**	**97.5**

Material description

No 7 - 12 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22042
		Report No	22042/R003
		Date Issued	23/05/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 13	*Date tested*	27/04/22
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 09:39

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*	2.08	2.02	2.05	1.97	2.00	1.97
Field moisture content	*%*	18.5	18.8	18.4	20.1	18.3	20.6

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*	2.09	2.07	2.07	1.97	2.06	2.03
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	20.0	20.5	22.5	18.5	23.5

Moisture Variation From Optimum Moisture Content		1.5% dry	1.5% dry	2.0% dry	2.5% dry	0.0%	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})	*%*	**100.0**	**98.0**	**99.0**	**100.0**	**97.0**	**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	22042
		Report No	22042/R004
		Date Issued	07/06/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 13	*Date tested*	03/05/22
Location	WOLLERT	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	12:33

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*	1.96	1.95	2.02	1.92	1.93	1.93
Field moisture content	*%*	23.6	27.6	22.0	22.2	24.0	24.0

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*	2.02	2.04	2.07	1.97	1.97	1.97
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	23.5	30.5	21.0	22.0	23.5	24.0

Moisture Variation From Optimum Moisture Content	0.0%	2.5% dry	1.0% wet	0.0%	0.5% wet	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})	*%*	**97.0**	**95.5**	**98.0**	**97.5**	**98.0**	**98.0**

Material description

No 19 - 24 Clay Fill

Approved Signatory : Justin Fry