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

15th March 2023

Our Reference: 22140:NB1434

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RATHDOWNE – STAGE 14 (WOLLERT)

Please find attached our Report No's 22140/R001 to 22140/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 February 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).

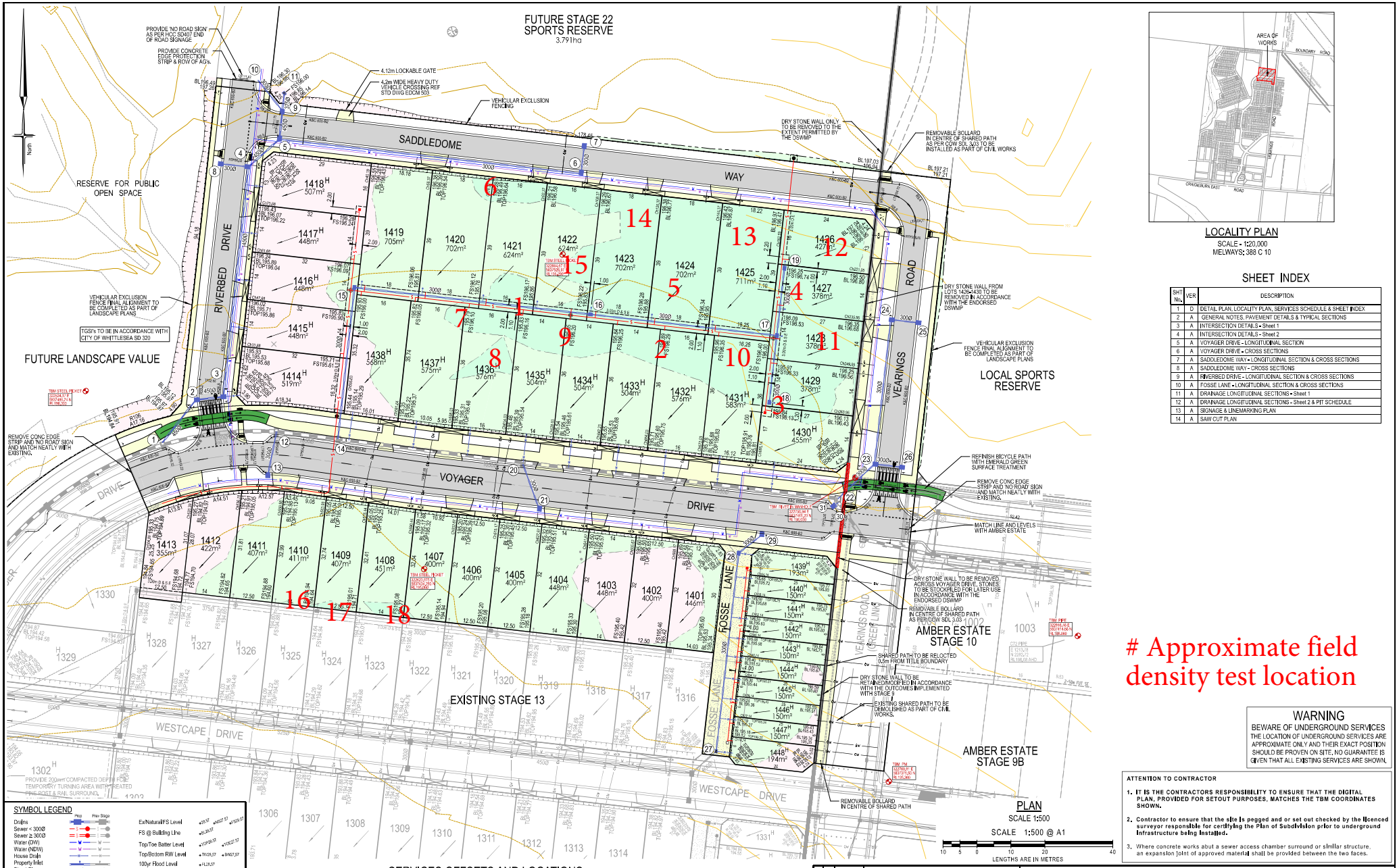
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



LOCALITY PLAN
SCALE - 1:20,000
MELWAYS: 388 C 10

SHEET INDEX

PLAN
SCALE 1:500
SCALE 1:500 @ A1
LENGTHS ARE IN METRES

Approximate field density test location

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION 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 and or set out checked by the licenced surveyor responsible for certifying the Plan of Subdivision 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 (Plts / Prev Stage)
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 Batter Level
Top/Bottom RW Level
100yr Flood Level
Fill Proposed (<0.3m≥0.2m)
Cut Proposed
Asphalt Surface Prop
Concrete Surface Prop (Paths/Driveways/Slabs)
Tree To Be Removed
Tree To Be Retained with Tree Protection Zone (TPZ)

SERVICES OFFSETS AND LOCATIONS

Location	Gas	Water		Communications		Electricity		BOK	Road Width	Joint Trenching	Street Classification	Street Trees
		NDW	DW	Cables	Pits	Cables	Poles					
SADDLEDOME WAY (East/West)	2.10 N	2.60 N	3.10 N	1.80 S	1.80 N/S	2.60 S	1.00 BOK	4.35S,2.55N	14.50	G/W,FTTH/E	LEVEL 1	NS CENTRE
RIVERBED DRIVE	2.10 N	2.60 N	3.10 N	1.80 S	1.80 N/S	2.60 S	1.00 BOK	4.05S,4.35N	16.00	G/W,FTTH/E	LEVEL 1	NS CENTRE
VEARINGS ROAD (North/South)	3.60 W	4.05 W	4.50 W	1.80 E	1.80E/0.20W	2.60 E	1.00 BOK	8.15W,4.85E	20.60	G/W,FTTH/E	LEVEL 1	NS CENTRE
FOSSE LANE									8.00		LEVEL 1	NS CENTRE
VOYAGER DRIVE	2.25 E	2.70 E	3.20 E	1.80 W	1.80 E/W	2.60 W	1.00 BOK	4.55E,8.55W	25.00	G/W,FTTH/E	COLLECTOR	NS CENTRE
VEARINGS ROAD (GREENLINK)	Ex.1.70 E	Ex.2.10 E	Ex.2.55 E	Ex.1.80 W	Ex.1.80 E/W	Ex.2.60 W	1.00 BOK		20.60	G/W,FTTH/E		

VER	DATE	REMARKS
D	08/11/22	LOT 1416 DRIVEWAY SWAP
C	03/11/22	SHEET 14 SAW CUT PLAN ADDED
B	28/04/22	SEWER MAIN EXTENSION
A	17/02/22	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. 388-C-10
SURVEY BPD
DESIGN GL
DRAWN PG
CHECKED

RATHDOWNE ESTATE
STAGE 14

SCALE AS SHOWN | DATUM AHD | DATE OCT '21

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365E/14
SHEET 1 OF 14 | D

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22140
		Report No	22140/R001
		Date Issued	06/02/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 14	*Date tested*	01/02/23
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 07:22

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*	1.94	1.93	1.96	1.97	1.94	1.96
Field moisture content	*%*	21.9	18.3	18.7	19.7	22.7	23.4

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*	1.99	1.96	2.03	2.02	2.02	2.02
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.5	21.0	21.0	22.5	25.0	24.5

Moisture Variation From Optimum Moisture Content		0.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	1.5% 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**	**98.5**	**96.5**	**97.5**	**96.0**	**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	22140
		Report No	22140/R002
		Date Issued	06/02/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 14	*Date tested*	02/02/23
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 08:37

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*	1.98	1.97	1.95	1.99	2.04	1.95
Field moisture content	*%*	23.9	23.9	20.2	19.9	19.0	19.7

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*	2.04	2.03	2.03	2.06	2.09	2.00
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	24.5	24.5	22.5	22.0	21.5	22.5

Moisture Variation From Optimum Moisture Content		0.5% dry	0.5% dry	2.0% 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})	*%*	**97.0**	**97.5**	**96.5**	**96.5**	**97.5**	**97.5**

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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	22140
		Report No	22140/R003
		Date Issued	06/02/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	RATHDOWNE - STAGE 14	*Date tested*	03/02/23
Location	WOLLERT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 09:33

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*	1.95	1.94	1.93	1.97	1.94	1.94
Field moisture content	*%*	21.8	21.5	20.1	23.4	23.5	21.5

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*	2.01	1.97	1.99	2.03	2.01	2.02
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	23.0	24.0	20.0	25.5	25.5	23.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	0.0%	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})	*%*	**97.5**	**98.5**	**96.5**	**97.0**	**97.0**	**96.0**

Material description

No 13 - 18 Clay Fill

Approved Signatory : Justin Fry