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

8th August 2018

Our Reference: 17394:NB255

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RIVERDALE – STAGE 14 (TARNEIT)

Please find attached our Report No's 17394/R001 and 17394/R002 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 July 2017.

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).

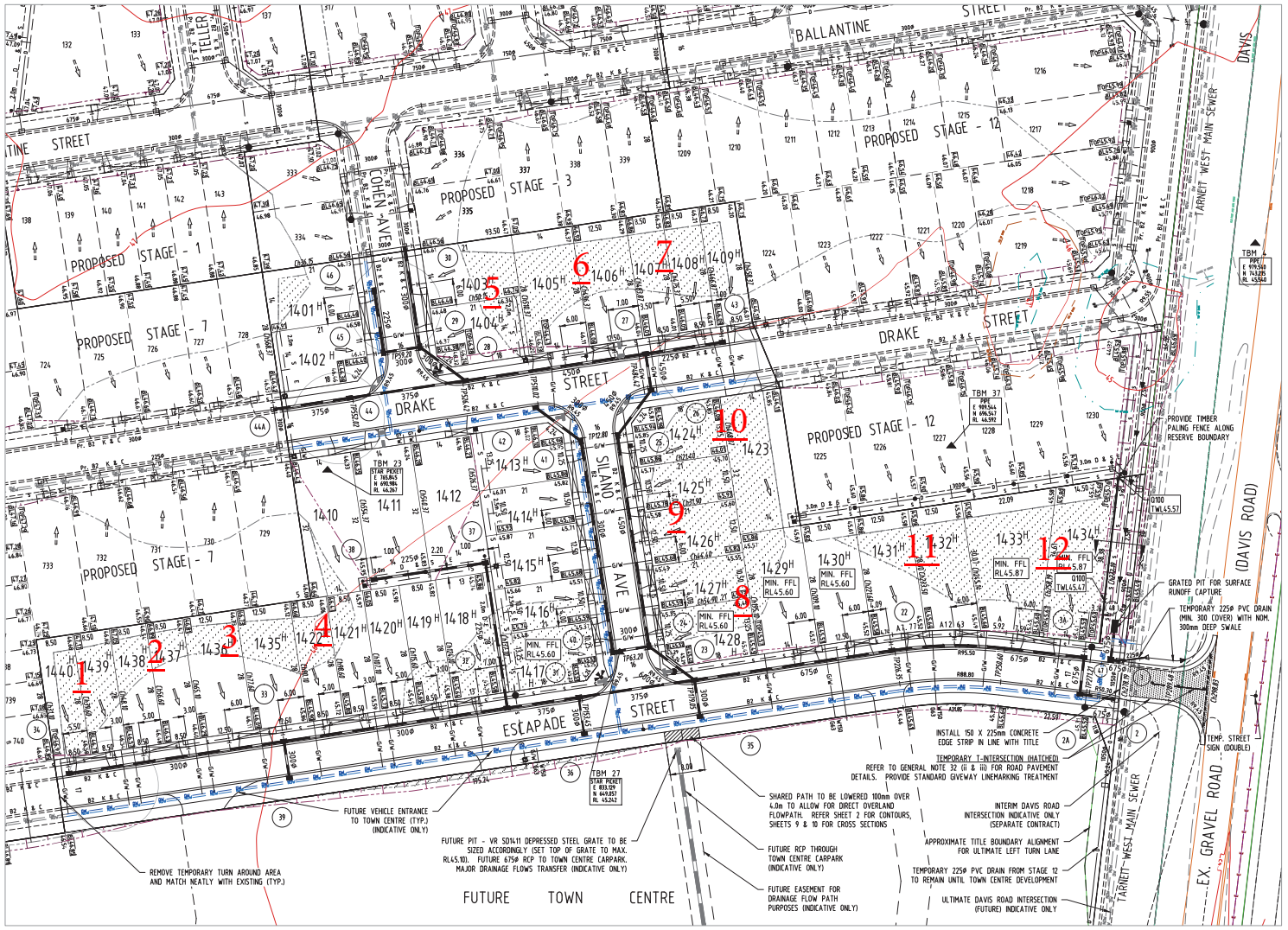
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

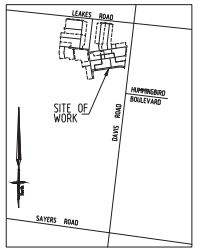
FIGURE 1



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.



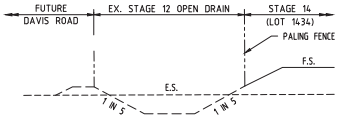
LOCALITY PLAN

NOT TO SCALE

North

SHT. No.	VER	DRAWING INDEX DESCRIPTION
1	A	LAYOUT PLAN, LOCALITY PLAN AND SERVICE OFFSETS
2	A	INTERSECTION DETAILS, GENERAL NOTES
3	A	KERB LIP PROFILES
4	A	SETOUT INFORMATION
5	A	ROAD LONGITUDINAL SECTIONS - 1
6	A	ROAD LONGITUDINAL SECTIONS - 2
7	A	ROAD CROSS SECTIONS DRAKE STREET
8	A	ROAD CROSS SECTIONS SILANO AVENUE & COHEN AVENUE
9	A	ROAD CROSS SECTIONS ESCAPADE STREET - 1
10	A	ROAD CROSS SECTIONS ESCAPADE STREET - 2
11	A	DRAINAGE LONGITUDINAL SECTIONS - 1
12	A	DRAINAGE LONGITUDINAL SECTIONS - 2 AND PIT SCHEDULE

Approximate field density test location



SECTION X-X

RESERVE EX. OPEN DRAIN

N.T.S.

LAYOUT PLAN

SCALE: 1:500

10 0 10

1:500 @ A1

ALL LENGTHS ARE IN METRES

SERVICES OFFSETS AND LOCATIONS

STREET NAME	ROAD RESERVE	WATER (NDW)	WATER (DW)	GAS	ELECTRICITY CABLES	ELECTRICITY POLES	TELECOM. NBN	STREET TREES	BACK OF KERB	JOINT TRENCHING
DRAKE STREET	16.00	2.70 S	3.20 S	2.20 S	2.45 N	1.00 BOK	1.80 N	2.95 S 2.95 N	4.35 S 4.05 N	W,G & E,T
COHEN AVENUE	16.00	2.70 W	3.20 W	2.20 W	2.45 E	1.00 BOK	1.85 E	2.95 W 2.95 E	4.35 W 4.05 E	W,G & E,T
SILANO AVENUE	16.00	2.70 W	3.20 W	2.20 W	2.45 E	1.00 BOK	1.85 E	2.95 W 2.95 E	4.35 W 4.05 E	W,G & E,T
ESCAPADE STREET	17.00	3.70 S	4.20 S	3.20 S	2.45 N	1.00 BOK	1.85 N	2.95 S 2.95 N	5.35 S 4.05 N	W,G & E,T

SYMBOL LEGEND

Prop Drains
Exist Drains < 600
Exist Drains > 600
Prop Sewers < 300
Prop Sewers > 300
Exist Sewers < 300
Exist Sewers > 300
Prop Water
Prop Gas Conduit
Exist Water
Exist Gas
Exist Telstra/Optus
Exist Electricity
Prop 100mm Water Conduit
House drain
Property Inlet
Street Sign
PSM
Existing Surface Level + 29.57
F.S. Level at Building Line + RL28.57
F.S. Level at Top of Batter + RL28.57
F.S. Level at Back of Lots + 28.57
Top of Retaining Wall Level + RL28.57
F.S. Level Previous Stage + 29.57
Coloured Concrete Pavement
Fill > 200mm

COUNCIL REF. No. 2051/16 - 6215/12

VER.	DATE	REMARKS
A	14-10-2016	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

RIVERDALE VILLAGE
STAGE 14

MELWAY REF. 234-G-2
SURVEY BPD
DESIGN L.G.
DRAWN L.G.
CHECKED
SCALE AS SHOWN
DATUM AHD
DATE NOV' 16

MUNICIPALITY WYNDHAM
REFERENCE 8554 E/14
SHEET 1 OF 10 A

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	17394
		Report No	17394/R001
		Date Issued	02/08/2017
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JB
Project	RIVERDALE - STAGE 14	*Date tested*	13/07/17
Location	TARNEIT	*Checked by*	JHF

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

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*	1.80	1.76	1.77	1.82	1.81	1.83
Field moisture content	*%*	23.1	23.2	24.9	20.1	19.1	20.5

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*	1.82	1.75	1.76	1.86	1.87	1.82
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	25.5	26.0	27.5	22.0	21.5	23.0

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 Ratio (R_{HD})	***%***	**99.0**	**100.5**	**100.5**	**97.5**	**97.0**	**100.0**

Material description

No 1 - 6 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	17394
		Report No	17394/R002
		Date Issued	11/08/2017
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JB
Project	RIVERDALE - STAGE 14	*Date tested*	17/07/17
Location	TARNEIT	*Checked by*	JHF

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

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*	1.81	1.80	1.89	1.89	1.82	1.87
Field moisture content	*%*	25.1	25.6	25.6	26.7	24.1	25.1

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*	1.86	1.85	1.94	1.92	1.90	1.90
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	26.0	27.0	26.5	27.5	25.5	27.5

Moisture Variation From Optimum Moisture Content		1.0% dry	1.5% dry	1.0% dry	1.0% dry	1.5% dry	2.5% dry
Density Ratio (R_{HD})	*%*	**97.5**	**97.0**	**97.5**	**98.5**	**95.5**	**98.5**

Material description

No 1 - 6 Clay Fill

Approved Signatory : Justin Fry