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

13th October 2021

Our Reference: 21311:NB1051

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OFFICER FIELDS – STAGE 2 (OFFICER)

Please find attached our Report No's 21311/R001 to 21311/R005 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 May 2021 and was completed in October 2021.

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).

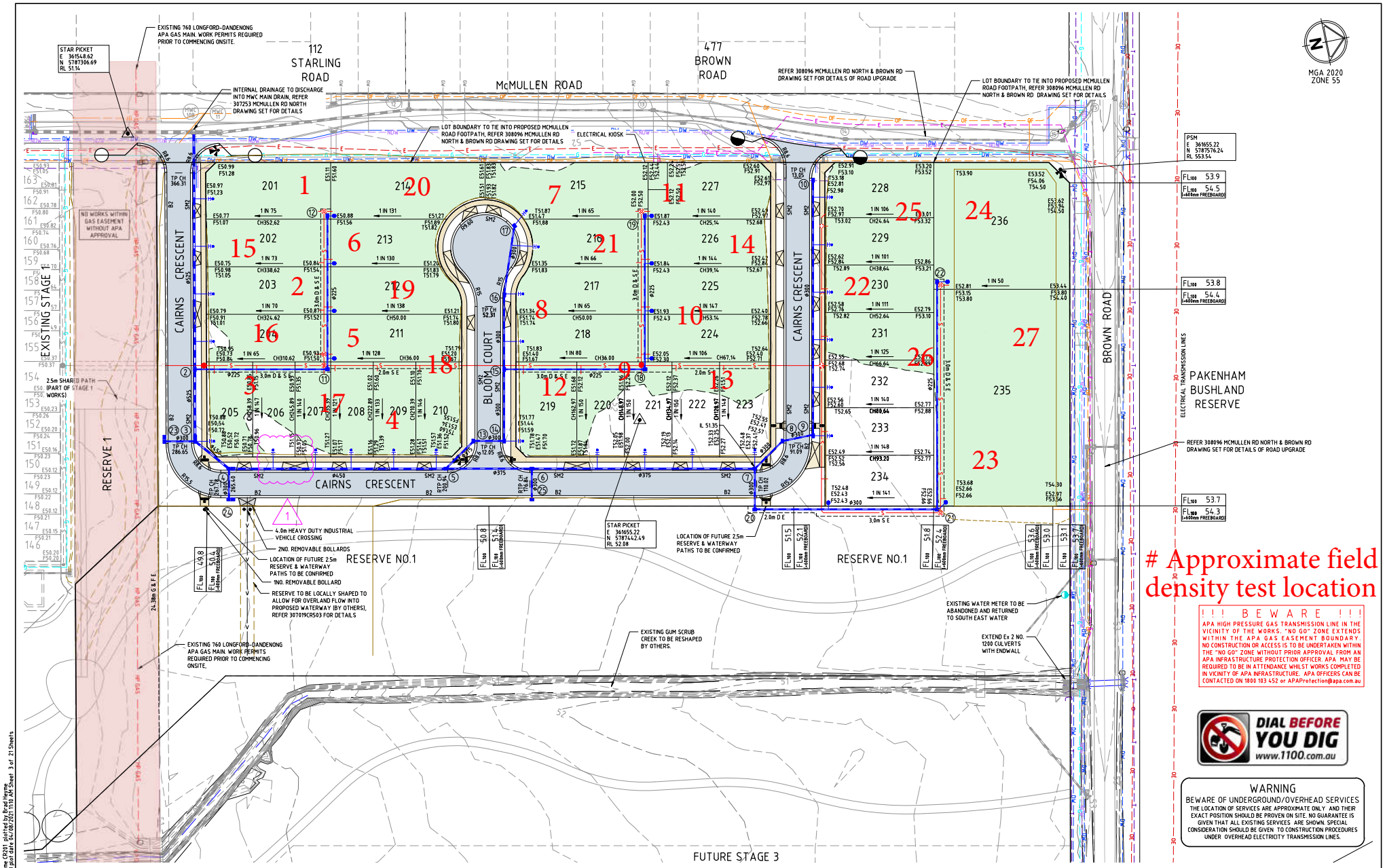
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



Rev	Amendments	Approved	Date
1	DW SHIFT LOT 206	S.M	04/08/21
0	ISSUED FOR CONSTRUCTION	SM	04/05/21
E	UPDATES AS PER COUNCIL COMMENTS	SM	29/04/21
D	UPDATES AS PER COUNCIL COMMENTS	SM	19/04/21
C	UPDATES AS PER COUNCIL COMMENTS	SM	08/04/21
B	UPDATES AS PER COUNCIL COMMENTS	SM	26/02/21
A	ISSUED FOR APPROVAL	SM	05/11/20

Scale: H 1:500 SCALE @ A1 (0, 5, 10, 15, 20, 25)

spiire
414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

YourLand Developments

Designed	Checked
J.SIM	B. MUGRIDGE
Authorised	Date
S.MURPHY	17-08-20

OFFICER FIELDS STAGE 2
ROAD AND DRAINAGE
ROAD LAYOUT PLANS - ROAD AND DRAINAGE
CARDINIA SHIRE COUNCIL
YOURLAND PTY LTD

CONSTRUCTION Drg No. 307019CR201 Rev 1

file name 307019CR206.dwg layout name CR201 plotted by Brad Heyme
file location R:\3P\307019\Civil\ACAD plot date 5/08/2021 11:18 AM Sheet 3 of 21Sheets

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	21311
		Report No	21311/R001
		Date Issued	21/09/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	OFFICER FIELDS - STAGE 2	*Date tested*	07/07/21
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:30

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*	2.10	2.08	2.09	2.08	2.08	2.06
Field moisture content	*%*	13.1	13.4	13.8	12.1	14.6	14.4

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*	2.12	2.12	2.13	2.15	2.09	2.10
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	13.0	16.0	15.5	14.0	16.0	16.0

Moisture Variation From Optimum Moisture Content	0.0%	2.5% dry	2.0% dry	2.0% dry	1.5% dry	2.0% dry

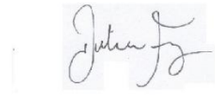
Density Ratio (R_{HD})	***%***	**99.0**	**98.0**	**98.0**	**96.5**	**99.5**	**98.0**

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	21311
		Report No	21311/R002
		Date Issued	15/09/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	OFFICER FIELDS - STAGE 2	*Date tested*	08/07/21
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:00

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*	2.05	2.03	2.00	1.99	1.98	2.00
Field moisture content	*%*	18.1	20.3	18.4	18.2	18.8	18.3

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*	2.09	2.09	2.04	2.04	2.04	2.05
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	18.0	20.5	18.0	19.0	19.0	18.5

Moisture Variation From Optimum Moisture Content		0.0%	0.0%	0.0%	0.5% dry	0.0%	0.0%

Density Ratio (R_{HD})	***%***	**98.0**	**97.5**	**98.0**	**97.5**	**97.0**	**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	21311
		Report No	21311/R003
		Date Issued	21/07/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	OFFICER FIELDS - STAGE 2	*Date tested*	12/07/21
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:00

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*	2.04	2.03	2.03	2.03	2.03	2.04
Field moisture content	*%*	17.3	17.6	18.4	17.8	17.5	18.0

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*	2.15	2.12	2.15	2.10	2.13	2.10
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	15.0	15.5	16.0	16.0	15.5	15.5

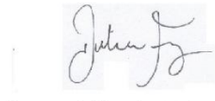
Moisture Variation From Optimum Moisture Content		2.0% wet	2.0% wet	2.0% wet	1.5% wet	2.0% wet	2.0% wet
Density Ratio (R_{HD})	*%*	**95.5**	**95.5**	**95.0**	**97.0**	**95.5**	**97.0**

Material description

No 13 - 18 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	21311
		Report No	21311/R004
		Date Issued	13/10/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	OFFICER FIELDS - STAGE 2	*Date tested*	11/10/21
Location	OFFICER	*Checked by*	JHF

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

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*	2.03	2.04	2.05	2.03	2.05	2.04
Field moisture content	*%*	18.4	17.5	18.8	17.7	17.3	17.3

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*	2.06	2.11	2.10	2.04	2.06	2.08
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	19.5	21.0	19.0	19.0	19.5

Moisture Variation From Optimum Moisture Content		2.0% dry	1.5% dry	2.0% dry	1.5% dry	2.0% dry	2.0% dry
Density Ratio (R_{HD})	*%*	**98.5**	**97.0**	**97.5**	**99.5**	**99.5**	**98.0**

Material description

No 19 - 24 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	21311
		Report No	21311/R005
		Date Issued	13/10/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	OFFICER FIELDS - STAGE 2	*Date tested*	11/10/21
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**25**	**26**	**27**	**-**	**-**	**-**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL							
Measurement depth	*mm*	175	175	175	-	-	-
Field wet density	*t/m³*	2.04	2.04	2.03	-	-	-
Field moisture content	*%*	19.3	18.5	17.5	-	-	-

Test procedure AS 1289.5.7.1

Test No		25	26	27	-	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	-	-	-
Percent of oversize material	*wet*	0	0	0	-	-	-
Peak Converted Wet Density	*t/m³*	2.11	2.10	2.06	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	21.0	20.0	19.5	-	-	-

Moisture Variation From Optimum Moisture Content		1.5% dry	1.5% dry	2.0% dry	-	-	-

Density Ratio (R_{HD})	*%*	**97.0**	**97.0**	**98.5**	**-**	**-**	**-**

Material description

No 25 - 27 Clay Fill

Approved Signatory : Justin Fry