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

18th June 2015

Our Reference: 14436:DK001

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ASPECT ESTATE (STAGE 4) – GREENVALE

Please find attached our Report Nos 14436/R001 to 14436/R006 that 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 late November 2014 and was completed in mid June 2015.

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 inspections and testing was performed by an experienced geotechnician 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 filled 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).

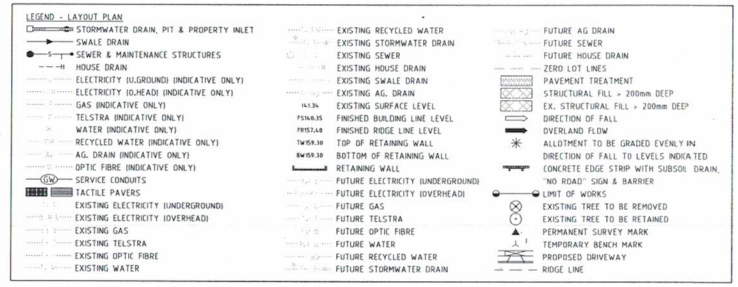
We are of the view that the bulk fill materials that have been placed across the filled allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

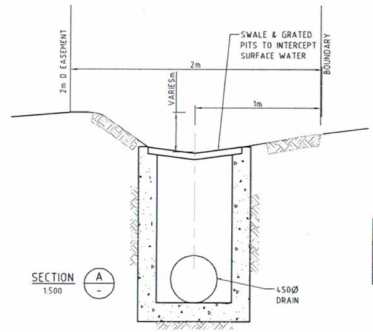
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Dino Kondzic

FIGURE 1





NOTE:

REFER TO SHEET 22 FOR PROPERTY INLET PIT DETAIL FOR LOTS 412 TO 419, 444 TO 445, 433, FUT516 & FUT520.

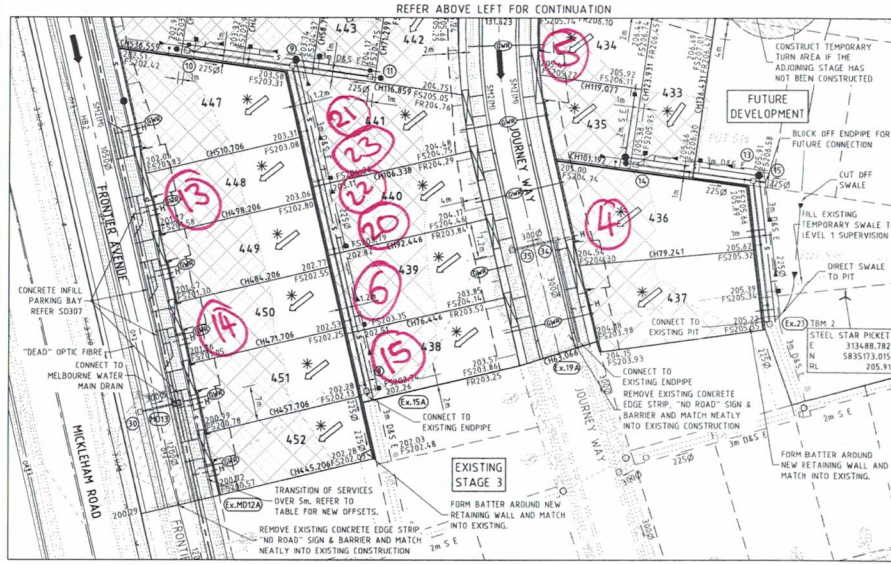
HOUSE DRAIN CONNECTION CONTROL LEVELS:

LOT 446 - RL202.300
LOT 434 - RL205.230
LOT 435 - RL205.200

PLEASE NOTE THAT CONNECTIONS SHOULD BE BUILT TO THE LEVELS PROVIDED.
CONNECTIONS CAN BE BUILT LOWER IF REQUIRED.

RETAINING WALLS ARE NOT PART OF THE SUBDIVISIONAL WORKS OR APPROVAL AND ARE SUBJECT TO SEPERATE APPROVAL

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.
Locate all underground services before commencement of work.
DIAL 1100 BEFORE YOU DIG
www.1100.com.au



ROAD LAYOUT TABLE								
ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)			KERB TYPE		VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST
FRONTIER AVENUE (LOT 401 - 411)	16.00	6.70	7.30	7.90	SM2(M)	SM2(M)	4.05	4.05
FRONTIER AVENUE (LOT 420 - 424 & LOT 446 - 452)	16.00	4.75	5.50	5.95	HB2	SM2(M)	4.85	5.20
JOURNEY WAY	16.00	6.70	7.30	7.90	SM2(M)	SM2(M)	4.20	3.90
PRESTIGE DRIVE	16.00	6.70	7.30	7.90	SM2(M)	SM2(M)	4.20	4.05

SERVICES OFFSET SCHEDULE										
ROAD NAME	GAS		RECYCLED WATER		WATER		ELECTRICITY		NBN	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
FRONTIER AVENUE (LOT 401 - 411)	SOUTH	2.00	SOUTH	2.70	SOUTH	3.50	NORTH	2.80	NORTH	2.30
FRONTIER AVENUE (LOT 420 - 424 & LOT 446 - 452)	EAST	2.15	EAST	2.65	EAST	3.15	WEST	4.30	WEST	3.80
JOURNEY WAY	WEST	2.10	WEST	2.50	WEST	3.00	EAST	2.60	EAST	1.85
PRESTIGE DRIVE	NORTH	2.20	NORTH	2.60	NORTH	3.10	SOUTH	2.60	SOUTH	1.85

(#) APPROXIMATE FIELD DENSITY LOCATION

REVISION		DATE	DES/DFT	APPD
G	LOT 422 PARKING BAY REMOVED	7.11.14	SM	AB
F	ISSUED FOR CONSTRUCTION	6.11.14	SM	AB
E	PARKING BAYS CHANGED/DOUBLE DRIVEWAY FOR LOTS 422 & 433	29.10.14	SM	AB
D	ADDITIONAL TACTILE PAVERS ADDED & SWALE SHOWN ON HIGH SIDE OF RETAINING WALL	24.10.14	SM/SS	AB
C	TBMS ADDED/DRAINAGE ALIGNMENT AMENDED	16.10.14	SM/SS	AB
B	ISSUED TO COUNCIL FOR APPROVAL	15.09.14	SM/SS	AB
A	PRELIMINARY PLAN	12.09.14	SM/SS	AB

PEET
Principal
Peet Limited
Level 3, 492 St Kilda Road
Melbourne VIC 3004

All setting out should be carried out in accordance with GAA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

Designed S.Murad
Drawn S.Sathasivam
Checked S.Cooper
Authorised A.Burrows
Date September 2014

N
Scale @ A1 1:500
0 5 10 20

SMEC
Local People. Global Experience.
URBAN DEVELOPMENT
Level 10, 71 Queens Road, Melbourne VIC 3004
p +61 3 9514 1500 | f +61 3 9514 1502 | www.smec.com

Aspect Estate, Greenvale
Stage 4
Hume City Council
Roadworks and Drainage
Layout Plan

Drawing No. 0811E-04-02 **Rev G**
Sheet No. 2 of 29

For Construction

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	14436
		Report No	14436/R001
		Date Issued	05/01/15
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JWM
Project	ASPECT - STAGE 4	*Date tested*	21/11/14
Location	GREENVALE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:09

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**1**	**2**	**3**	**-**	**-**	**-**
		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*	1.91	1.99	1.84	-	-	-
Field moisture content	*%*	24.6	23.1	27.2	-	-	-

Test procedure AS 1289.5.7.1

Test No		1	2	3	-	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	-	-	-
Percent of oversize material	*wet*	2	0	0	-	-	-
Peak Converted Wet Density	*t/m³*	1.96	1.98	1.94	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	2.00	-	-	-	-	-
Optimum Moisture Content	*%*	25.0	23.0	25.5	-	-	-

Moisture Variation From Optimum Moisture Content		0.0%	0.0%	1.5% wet	-	-	-

Density Ratio (R_{HD})	***%***	**95.5**	**100.5**	**95.0**	**-**	**-**	**-**

Material description

No 1 - 3 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	14436
		Report No	14436/R002
		Date Issued	23/02/15
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SC
Project	ASPECT - STAGE 4	*Date tested*	25/11/14
Location	GREENVALE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 01:30

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**4**	**5**	**6**	**7**	**-**	**-**
		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	-	-
Field wet density	*t/m³*	1.91	1.93	1.96	1.91	-	-
Field moisture content	*%*	18.4	12.1	18.4	12.6	-	-

Test procedure AS 1289.5.7.1

Test No		4	5	6	7	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	-	-
Percent of oversize material	*wet*	0	0	1	0	-	-
Peak Converted Wet Density	*t/m³*	1.93	1.97	1.92	1.96	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	1.94	-	-	-
Optimum Moisture Content	*%*	20.0	14.5	21.0	15.0	-	-

Moisture Variation From Optimum Moisture Content		2.0% dry	2.5% dry	2.5% dry	2.5% dry	-	-

Density Ratio (R_{HD})	***%***	**99.0**	**98.5**	**101.0**	**97.5**	**-**	**-**

Material description

No 4 - 7 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	14436
		Report No	14436/R003
		Date Issued	23/02/15
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SC
Project	ASPECT - STAGE 4	*Date tested*	26/11/14
Location	GREENVALE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:45

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**8**	**9**	**10**	**11**	**12**	**-**
		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	-
Field wet density	*t/m³*	1.85	2.02	2.01	1.93	1.91	-
Field moisture content	*%*	17.4	13.6	14.2	18.5	13.8	-

Test procedure AS 1289.5.7.1

Test No		8	9	10	11	12	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	19.0	-
Percent of oversize material	*wet*	0	0	0	3	5	-
Peak Converted Wet Density	*t/m³*	1.95	1.99	2.00	1.98	1.99	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	2.00	2.00	2.01	-
Optimum Moisture Content	*%*	20.0	15.0	17.5	19.0	15.5	-

Moisture Variation From Optimum Moisture Content		2.5% dry	1.5% dry	2.5% dry	0.5% dry	2.0% dry	-

Density Ratio (R_{HD})	***%***	**95.0**	**101.0**	**100.5**	**97.0**	**95.0**	**-**

Material description

No 8 - 12 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	14436
		Report No	14436/R004
		Date Issued	23/02/15
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SC
Project	ASPECT - STAGE 4	*Date tested*	27/11/14
Location	GREENVALE	*Checked by*	JHF

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

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**13**	**14**	**15**	**-**	**-**	**-**
		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*	2.02	2.03	2.00	-	-	-
Field moisture content	*%*	12.9	14.8	12.2	-	-	-

Test procedure AS 1289.5.7.1

Test No		13	14	15	-	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	-	-	-
Percent of oversize material	*wet*	1	4	0	-	-	-
Peak Converted Wet Density	*t/m³*	2.00	1.95	1.99	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	2.02	2.03	-	-	-	-
Optimum Moisture Content	*%*	15.0	17.5	14.5	-	-	-

Moisture Variation From Optimum Moisture Content		2.0% dry	2.5% dry	2.5% dry	-	-	-

Density Ratio (R_{HD})	***%***	**100.0**	**100.0**	**100.5**	**-**	**-**	**-**

Material description

No 13 - 15 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	14436
		Report No	14436/R005
		Date Issued	25/02/14
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JWM
Project	ASPECT - STAGE 4	*Date tested*	23/02/15
Location	GREENVALE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:26

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**16**	**17**	**18**	**19**	**-**	**-**
Location		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	-	-
Field wet density	*t/m³*	1.93	1.93	2.00	1.96	-	-
Field moisture content	*%*	18.9	17.4	14.7	15.1	-	-

Test procedure AS 1289.5.7.1

Test No		16	17	18	19	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	-	-
Percent of oversize material	*wet*	0	0	0	0	-	-
Peak Converted Wet Density	*t/m³*	1.90	1.94	1.97	1.96	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	20.0	17.0	16.5	-	-

Moisture Variation From Optimum Moisture Content		1.5% dry	2.5% dry	2.5% dry	1.5% dry	-	-

Density Ratio (R_{HD})	***%***	**101.5**	**99.5**	**101.0**	**100.0**	**-**	**-**

Material description

No 16 - 19 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	14436
		Report No	14436/R006
		Date Issued	16/06/15
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	DK
Project	ASPECT - STAGE 4	Date tested	12/06/15
Location	GREENVALE	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	08:40

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**20**	**21**	**22**	**23**	**-**	**-**
		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1		
Approximate depth below FSL		0.5	0.5				
Measurement depth	*mm*	175	175	175	175	-	-
Field wet density	*t/m³*	2.16	2.07	2.11	2.14	-	-
Field moisture content	*%*	16.7	16.4	15.6	16.3	-	-

Test procedure AS 1289.5.7.1

Test No		20	21	22	23	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	-	-
Percent of oversize material	*wet*	0	0	0	0	-	-
Peak Converted Wet Density	*t/m³*	2.15	2.17	2.21	2.20	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	16.5	15.5	15.5	16.0	-	-

Moisture Variation From Optimum Moisture Content	0.5% wet	1.0% wet	0.0%	0.5% wet	-	-

Density Ratio (R_{HD})	**%**	**100.5**	**95.5**	**95.5**	**97.0**	**-**	**-**

Material description

No 20 - 23 Clay Fill

Approved Signatory : Justin Fry