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

4 September 2013

Our Reference: 13052:PJF1877

PEET Ltd
Level 3 492 St Kilda Road
MELBOURNE VIC 3004

Dear Sirs,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
LIVINGSTON ESTATE (STAGE 5A), CRANBOURNE

Please find attached our Report Nos 13052/R001 to 13052/R005 that relate to the field density testing that was conducted within the filled areas of Stage 5A of the Livingston Estate. The site stripping and associated filling works commenced in early February 2013 and were completed in the middle of the same month.

The inspection and testing duties, which were performed by an experienced geotechnician from this office, were undertaken in accordance with the Level 1 guidelines presented in AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments. 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 depth and breadth of the filled areas, are considered to be representative of the bulk fill materials that were placed within the filled areas shown on the attached drawing by Georgiou Pty Ltd (who were contracted to perform the civil works) during the aforementioned period. The approximate locations of the test sites are shown on the accompanying drawing.

When interpreting the requirements of AS 2870 - Residential Slabs and Footings (2011), we are of the view that the bulk fill materials that have been placed within the filled allotments by Georgiou 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).

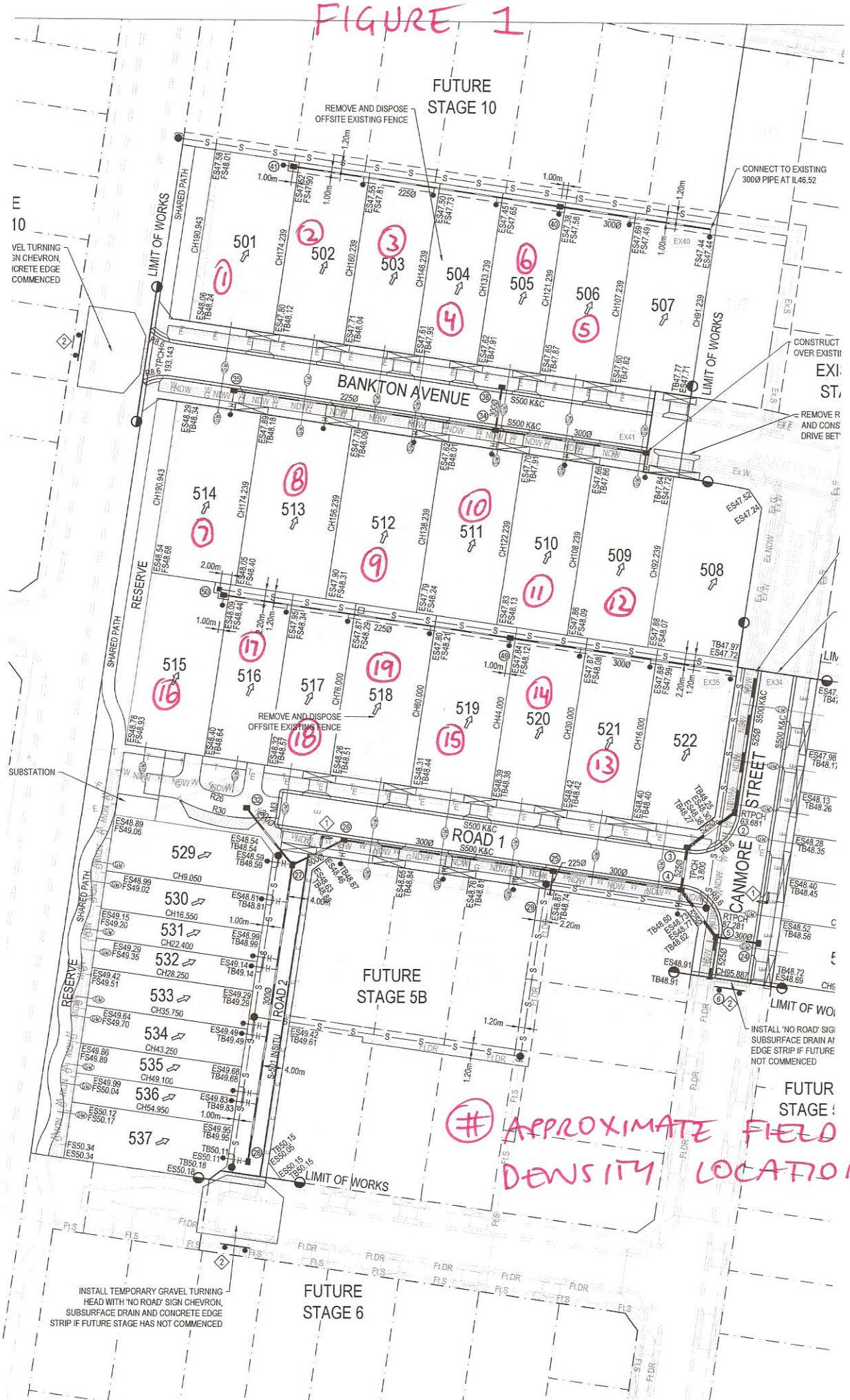
Please contact the undersigned if you require any additional information.

Yours faithfully,

Civil Geotechnical Services

Peter Fry

FIGURE 1



Livingston Cranbourne East PEET

MEINHARDT INFRASTRUCTURE & ENVIRONMENT

L12, 501 Swanston Street, Melbourne, VIC, Australia 3000
Telephone: (03) 8676 1200
Fax: (03) 8676 1201
www.meinhardtgroup.com
A.C.N. 100 868 979

CLIENT PE
DESIGNED SP
STATUS NC

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	13052
		Report No	13052/R001
		Date Issued	13/03/13
Client	PEET LTD (MELBOURNE)	*Tested by*	KC
Project	LIVINGSTON ESTATE - STAGE 5A	*Date tested*	05/02/13
Location	CRANBOURNE	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	14:04

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**1**	**2**	**3**	**4**	**-**	**-**
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*	1.74	1.78	1.77	1.72	-	-
Field moisture content	*%*	38.5	35.4	33.5	35.5	-	-

Test procedure AS 1289.5.7.1

Test No		1	2	3	4	-	-
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*	1.68	1.72	1.73	1.74	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	40.0	37.5	34.5	36.0	-	-

Moisture Variation From Optimum Moisture Content		1.5% dry	2.0% dry	1.0% dry	0.5% dry	-	-
Density Ratio (R_{HD})	*%*	**103.5**	**103.5**	**102.0**	**99.0**	**-**	**-**

Material description

No 1 - 4 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	13052
		Report No	13052/R002
		Date Issued	13/03/13
Client	PEET LTD (MELBOURNE)	*Tested by*	KC
Project	LIVINGSTON ESTATE - STAGE 5A	*Date tested*	06/02/13
Location	CRANBOURNE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 15:04

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**5**	**6**	**-**	**-**	**-**	**-**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate depth below FSL		-	-	-	-	-	-
Measurement depth	*mm*	175	175	-	-	-	-
Field wet density	*t/m³*	1.74	1.77	-	-	-	-
Field moisture content	*%*	29.5	30.2	-	-	-	-

Test procedure AS 1289.5.7.1

Test No		5	6	-	-	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	-	-	-	-
Percent of oversize material	*wet*	0	0	-	-	-	-
Peak Converted Wet Density	*t/m³*	1.68	1.66	-	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	34.0	35.5	-	-	-	-

Moisture Variation From Optimum Moisture Content	4.5% dry	5.5% dry	-	-	-	-

Density Ratio (R_{HD})	*%*	**103.0**	**106.5**	**-**	**-**	**-**	**-**

Material description

No 5 - 6 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	13052
		Report No	13052/R003
		Date Issued	13/03/13
Client	PEET LTD (MELBOURNE)	*Tested by*	KC
Project	LIVINGSTON ESTATE - STAGE 5A	*Date tested*	08/02/13
Location	CRANBOURNE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:48

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*	1.82	1.83	1.81	1.71	1.84	1.63
Field moisture content	*%*	30.4	31.1	23.6	29.6	30.7	24.0

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*	1.82	1.70	1.79	1.75	1.72	1.57
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	30.5	34.5	28.0	32.5	35.0	32.5

Moisture Variation From Optimum Moisture Content		0.5% dry	3.5% dry	4.0% dry	3.0% dry	4.0% dry	10.0% dry
Density Ratio (R_{HD})	*%*	**100.0**	**107.5**	**101.0**	**97.5**	**106.5**	**104.0**

Material description

No 7 - 12 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	13052
		Report No	13052/R004
		Date Issued	30/04/13
Client	PEET LTD (MELBOURNE)	*Tested by*	KC
Project	LIVINGSTON ESTATE - STAGE 5A	*Date tested*	11/02/13
Location	CRANBOURNE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:31

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**13**	**14**	**15**	**-**	**-**	**-**
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*	1.87	2.00	1.97	-	-	-
Field moisture content	*%*	25.2	22.5	20.0	-	-	-

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*	5	0	0	-	-	-
Peak Converted Wet Density	*t/m³*	1.73	1.83	1.86	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	1.76	-	-	-	-	-
Optimum Moisture Content	*%*	30.5	26.0	24.5	-	-	-

Moisture Variation From Optimum Moisture Content		5.0% dry	3.5% dry	4.5% dry	-	-	-

Density Ratio (R_{HD})	*%*	**106.5**	**109.0**	**106.5**	**-**	**-**	**-**

Material description

No 13 - 15 Clay Fill

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	13052
		Report No	13052/R005
		Date Issued	30/04/13
Client	PEET LTD (MELBOURNE)	*Tested by*	KC
Project	LIVINGSTON ESTATE - STAGE 5A	*Date tested*	12/02/13
Location	CRANBOURNE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:18

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*	1.85	1.84	1.83	1.96	-	-
Field moisture content	*%*	23.2	27.0	26.6	24.5	-	-

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*	1.72	1.75	1.74	1.85	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	28.0	31.5	31.0	27.0	-	-

Moisture Variation From Optimum Moisture Content		5.0% dry	4.5% dry	4.0% dry	2.5% dry	-	-
Density Ratio (R_{HD})	*%*	**107.5**	**105.5**	**105.0**	**105.5**	**-**	**-**

Material description

No 16 - 19 Clay Fill

Approved Signatory : Justin Fry