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

26th July 2018

Our Reference: 17581:NB243

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ALBRIGHT ESTATE – STAGE 3 (TRUGANINA)

Please find attached our Report No's 17581/R001 to 17581/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 October 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

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.

SHEET INDEX

FIGURE 1

BUS STOP DETAIL

SCALE 1 : 200

4 2 0 4 8 16

LENGTHS ARE IN METRES

PLAN

SCALE 1:500

SCALE 1 : 500 @ A1

10 5 0 10 20 40

LENGTHS ARE IN METRES

SYMBOL LEGEND

	Prop	Exist
Drains	S	S
Sewer <300	S	S
Sewer ≥300	S	S
Water	W	W
House Drain	H	H
Property Inlet		
Street Sign		
PSM		
Retaining Wall	REFERENCE	
Conduits 50mm	GW	GW
Conduits 100mm	W100	W100
Ex Gas/Elect/Tel	G E T	
TBM		

Ex/Natural/FS Level +28·57 +NS28·57 28·57

FS @ Building Line BL28·57

Top/Toe of Batter TOP28·57 TOE28·57

Top Ret. Wall Level TW28·57

100yr Flood Level FL28·57

Fill Prop/Ex (> 0.15m depth)

Cut Prop/Ex (> 0.15m depth)

KERB TRANSITION

VER.	DATE	REMARKS
C	10/08/17	CROSSOVER CHANGE AT LOT 304 & WATER CONDUIT LOCATION AMENDMENTS
B	19/07/17	TEMPORARY PIPE IL AMENDMENTS
A	04/07/17	ISSUE FOR CONSTRUCTION

AMENDMENTS

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.	360-E-11
SURVEY	BPD
DESIGN	D.P
DRAWN	D.P
CHECKED	

ALBRIGHT ESTATE STAGE 3

MUNICIPALITY: WYNDHAM

REFERENCE: 9354 E/3

SCALE AS SHOWN | DATUM AHD | DATE APR' 17 | SHEET 1 OF 23 | C

Plotted:16/08/2017

J:\H9354\ENG\ST03\E3_R01_DET.dgn

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	17581
		Report No	17581/R001
		Date Issued	13/12/2017
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JB
Project	ALBRIGHT ESTATE - STAGE 3	*Date tested*	04/10/17
Location	TRUGANINA	*Checked by*	JHF

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

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*	1.87	1.88	1.83	1.84	1.90	1.83
Field moisture content	*%*	28.0	27.7	30.3	27.7	30.6	27.2

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*	1.87	1.87	1.88	1.82	1.89	1.83
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	28.0	28.0	29.5	28.5	29.5	28.0

Moisture Variation From Optimum Moisture Content		0.0%	0.5% dry	0.5% wet	0.5% dry	1.0% wet	1.0% dry
Density Ratio (R_{HD})	*%*	**100.5**	**100.5**	**97.5**	**101.0**	**100.5**	**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	17581
		Report No	17581/R002
		Date Issued	13/12/2017
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JB
Project	ALBRIGHT ESTATE - STAGE 3	*Date tested*	05/10/17
Location	TRUGANINA	*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**	**-**	**-**
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*	1.87	1.85	1.84	1.91	-	-
Field moisture content	*%*	27.0	28.9	28.8	28.6	-	-

Test procedure AS 1289.5.7.1

Test No		7	8	9	10	-	-
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*	1.88	1.88	1.88	1.90	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	27.0	28.5	28.5	27.5	-	-

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

Density Ratio (R_{HD})	***%***	**99.5**	**99.0**	**97.5**	**101.0**	**-**	**-**

Material description

No 7 - 10 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	17581
		Report No	17581/R003
		Date Issued	02/01/2018
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	JB
Project	ALBRIGHT ESTATE - STAGE 3	*Date tested*	17/10/17
Location	TRUGANINA	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 08:01

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**11**	**12**	**13**	**14**	**-**	**-**
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*	1.92	1.87	1.84	1.86	-	-
Field moisture content	*%*	21.6	22.7	21.3	22.7	-	-

Test procedure AS 1289.5.7.1

Test No		11	12	13	14	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	-	-
Percent of oversize material	*wet*	1	1	2	4	-	-
Peak Converted Wet Density	*t/m³*	1.89	1.85	1.85	1.89	-	-
Adjusted Peak Converted Wet Density	*t/m³*	1.92	1.87	1.89	1.90	-	-
Optimum Moisture Content	*%*	24.0	25.0	23.0	24.0	-	-

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

Density Ratio (R_{HD})	***%***	**100.0**	**100.0**	**97.0**	**97.5**	**-**	**-**

Material description

No 11 - 14 Clay Fill

Approved Signatory : Justin Fry