



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

22nd October 2018

Our Reference: 18372:NB317

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CORNERSTONE – STAGE 14 (WYNDHAM VALE)**

Please find attached our Report No's 18372/R001 – 18372/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 June 2018.

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

ATTENTION TO CONTRACTOR

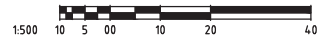
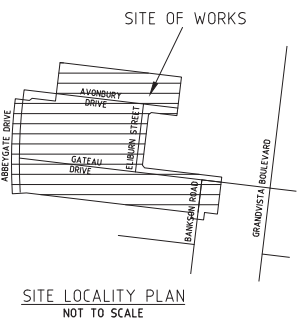
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM CO-ORDINATES SHOWN.
- WHERE CONCRETE WORKS ABOUT A SEWER ACCESS CHAMBER SURROUND OR SIMILAR STRUCTURE, AN EXPANSION JOINT OF APPROVAL MATERIAL SHALL BE PROVIDED BETWEEN THE TWO FACES.

WARNING

BEWARE OF UNDERGROUND SERVICES
THE LOCATION 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.

SHEET INDEX

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SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	RESERVE WIDTH	WATER		GAS		ELECTRICITY				TELECOMMUNICATIONS				BOK	
		DW	NDW	SIDE	OFFSET	SIDE	OFFSET	POLE		UG CABLE		SIDE	OFFSET	SIDE	SIDE
								OFFSET	OFFSET	OFFSET	OFFSET				
GATEAU DRIVE	16.00	3.20 S	2.70 S	2.25 S	N	0.80*	N	2.60	N	1.85	4.05 N	4.35 S			
AVONBURY DRIVE	16.00	3.20 N	2.70 N	2.25 N	S	0.80*	S	2.60	S	1.80	4.35 N	4.05 S			
ABBEGATE DRIVE	14.00	3.20 E	2.70 E	2.25 E	W	0.80*	W	1.40	W	0.65	2.55 W	4.25 E			
BANKSTON ROAD	16.00	3.20 E	2.70 E	2.25 E	W	0.80*	W	2.60	W	1.85	4.05 W	4.35 E			
ELBURYN STREET	16.00	3.20 W	2.70 W	2.25 W	E	0.80*	E	2.60	E	1.85	4.35 W	4.05 E			

NOTE: * OFFSET FROM BACK OF KERB

SYMBOL LEGEND

- Drains
- Sewer <300
- Sewer >300
- Water
- House Drain
- Property Inlet
- Street Sign
- PSM
- Retaining Wall
- Conduits 50mm
- Conduits 100mm
- Ex Gas/Elec/Tel
- Temporary Bench Mark (TBM)
- Ex/Natural/FS Level
- FS @ Building Line
- Top/Toe of Batter
- Top Ref. Wall Level
- Fill Prop/Ex
- Fill Prop/Ex
- Fill Prop/Ex
- Threshold Treatment

PLAN SCALE 1:500

NO.	DATE	CONSTRUCTION ISSUE	REMARKS
A	17.04.18	CONSTRUCTION ISSUE	
VER			

breese pitt dixon pty. ltd.
land surveyors civil engineers

MELWAY REF. 204 E9
SURVEY BPD
DESIGN JSB
DRAWN JDD
CHECKED RJ

CORNERSTONE ESTATE
STAGE 14
LAYOUT PLAN & DETAILS

MUNICIPALITY WYNDHAM
REFERENCE 8890 - E/14

1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310

SCALE AS SHOWN DATUM AHD DATE OCT '17 SHEET 1 OF 17



COMPACTION ASSESSMENT

Job No 18372
 Report No 18372/R001
 Date Issued 09/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	CORNERSTONE - STAGE 14	Date tested	27/06/18
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:24
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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/m ³	1.89	1.90	1.85	1.83	1.88	1.87
Field moisture content	%	31.1	36.4	33.3	33.8	30.5	29.8

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/m ³	1.91	1.90	1.90	1.91	1.90	1.90
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	31.0	34.0	33.5	31.5	28.0	30.0

Moisture Variation From Optimum Moisture Content	0.0%	2.5% wet	0.0%	2.5% wet	2.5% wet	0.0%
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Density Ratio (R _{HD})	%	99.0	100.0	97.0	96.0	98.5	98.5
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Material description

No 1 - 6 Clay Fill



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards. Accredited for compliance to ISO/IEC 17025. Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18372
 Report No 18372/R002
 Date Issued 10/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	CORNERSTONE - STAGE 14	Date tested	28/06/18
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:21
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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/m ³	1.84	1.85	1.84	1.86	1.85	1.86
Field moisture content	%	34.0	33.0	30.4	33.9	33.6	33.7

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/m ³	1.90	1.90	1.91	1.90	1.90	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	34.0	33.5	31.0	34.0	33.5	33.5

Moisture Variation From Optimum Moisture Content	0.0%	0.5% dry	0.5% dry	0.0%	0.0%	0.0%
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Density Ratio (R _{HD})	%	97.0	97.5	96.5	98.0	97.0	98.0
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Material description

No 7 - 12 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18372
 Report No 18372/R003
 Date Issued 09/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	CORNERSTONE - STAGE 14	Date tested	29/06/18
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:04
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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/m ³	1.85	1.79	1.85	-	-	-
Field moisture content	%	30.7	32.7	30.9	-	-	-

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	0	0	0	-	-	-
Peak Converted Wet Density	t/m ³	1.90	1.80	1.90	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	31.0	33.0	31.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.5% dry	0.0%	-	-	-
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Density Ratio (R _{HD})	%	97.0	100.0	97.5	-	-	-
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Material description

No 13 - 15 Clay Fill



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Approved Signatory : Justin Fry