



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

7th February 2018

Our Reference: 18071:NB132

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CORNERSTONE – STAGE 4 (WYNDHAM VALE)**

Please find attached our Report No's 18071/R001 to 18071/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 commenced in November 2017 and was completed in early February 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 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).

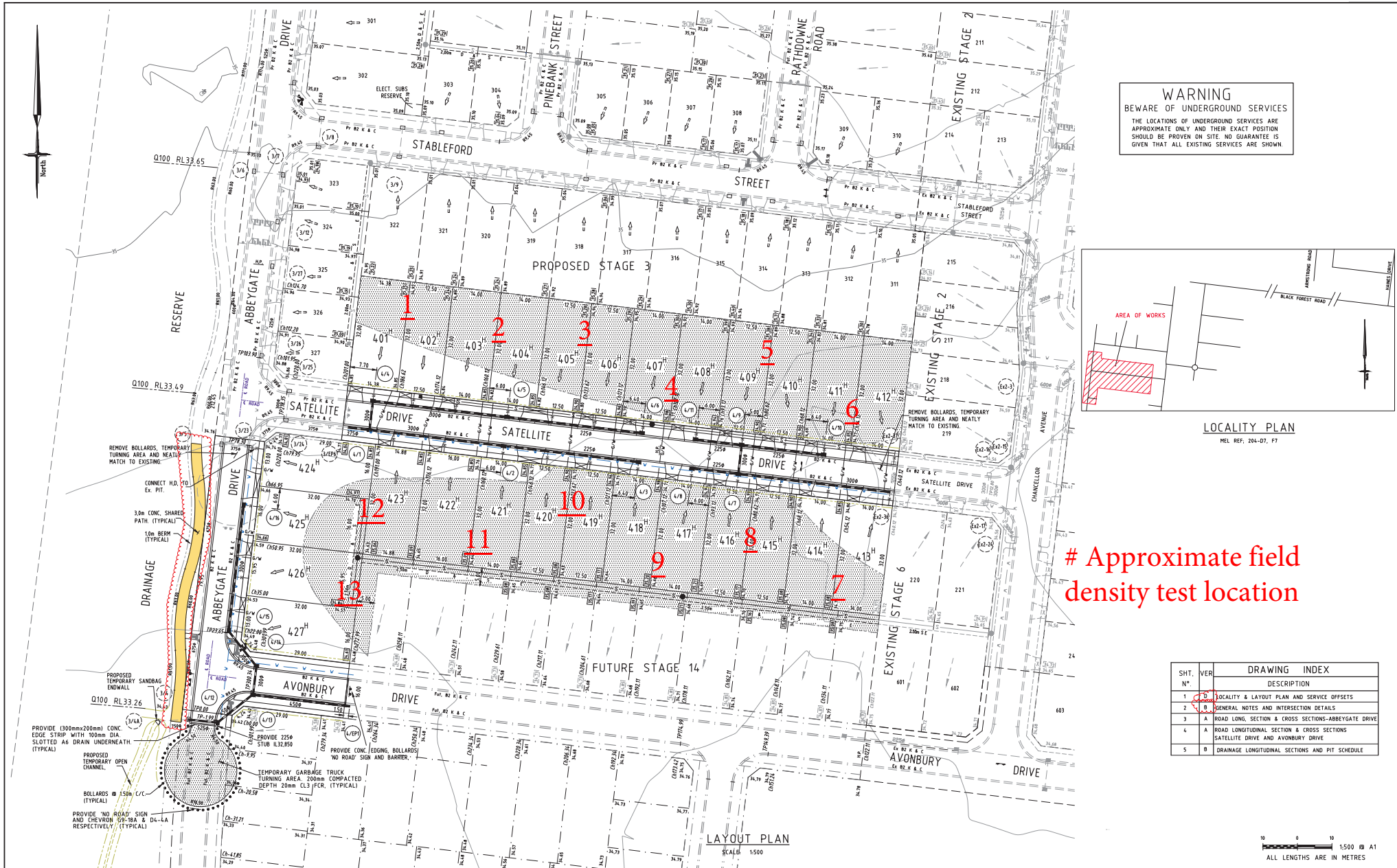
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a light blue circular stamp.

Nick Brock

FIGURE 1



SHT. N°	VER.	DRAWING INDEX DESCRIPTION
1	D	LOCALITY & LAYOUT PLAN AND SERVICE OFFSETS
2	B	GENERAL NOTES AND INTERSECTION DETAILS
3	A	ROAD LONG. SECTION & CROSS SECTIONS-ABBEYGATE DRIVE
4	A	ROAD LONGITUDINAL SECTION & CROSS SECTIONS SATELLITE DRIVE AND AVONBURY DRIVE
5	B	DRAINAGE LONGITUDINAL SECTIONS AND PIT SCHEDULE

SCALE 1:1500
ALL LENGTHS ARE IN METRES

SERVICES OFFSETS AND LOCATIONS

STREET NAME	ROAD RESERVE	WATER (NDW)	WATER (DW)	GAS	ELECTRICITY		TELECOM	BACK OF KERB	JOINT TRENCHING
					CABLES	POLES			
ABBEYGATE DRIVE	14.50	2.70 E	3.20 E	2.25 E	1.15 W	0.80 BOK	0.65 W	4.35 E 2.55 W	W.G. & E.T.
SATELLITE DRIVE	16.00	2.70 S	3.20 S	2.25 S	2.60 N	0.80 BOK	1.85 N	4.35 S 4.05 N	W.G. & E.T.
AVONBURY DRIVE	16.00	2.70 N	3.20 N	2.25 N	2.60 S	0.80 BOK	1.80 S	4.35 N 4.05 S	W.G. & E.T.

SYMBOL LEGEND

- Prop Drains
- Exit Drains > 600
- Prop Sewers > 300
- Prop Sewers > 300
- Prop Sewers > 300
- Prop Sewers > 300
- Prop Sewers > 300
- Prop Water
- Prop Gas Conduit
- Exit Water
- Exit Gas
- Exit Fibre/Optics
- Exit Electricity
- Ultimate Line Works
- Prop 150mm Water Conduit
- House drain
- Property shed
- Street Sign
- Exit Surface Level
- Finished Surface Level
- Proposed/Future Finished Level
- FRI = 150mm
- Cut

VER.	DATE	REMARKS	CHECKED
A	13-10-2017	SHARED PATH ALONG RESERVE. DRG INDEX REV NO. AMENDED	
C	4-7-2017	DRAINAGE SIZE LEG 4/15-4/76 & REVISION INDEX AMENDED	
B	21-6-2017	CONDUITS TO LOT1491, 412, 413 & 424, REVISION INDEX AMENDED	
A	13-6-2017	ISSUED FOR CONSTRUCTION	

breese pitt dixon pty. ltd.
land surveyors civil engineers

MELWAY REF. 204 07-F7

CORNERSTONE ESTATE
STAGE 4
DETAIL LAYOUT PLAN

1/19 Colo Street
Hawthorne East, 3123
Telephone 8823 2300
Fax no. 8823 2310

MINICIPALITY
WYNDHAM

REFERENCE
8890 E/04

SCALE AS SHOWN DATUM AHD DATE FEB' 17 SHEET 1 OF 5



COMPACTION ASSESSMENT

Job No 18071
 Report No 18071/R001
 Date Issued 07/02/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	CORNERSTONE - STAGE 4	Date tested	05/02/18
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:54
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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
Field wet density	t/m ³	1.82	1.80	1.77	1.83	1.74
Field moisture content	%	25.1	27.1	28.5	24.5	27.4

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.87	1.79	1.76	1.82	1.76
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.0	30.0	31.0	26.5	30.0

Moisture Variation From Optimum Moisture Content	1.0% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	98.0	100.5	100.5	100.5	99.0	100.0
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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 18071
 Report No 18071/R002
 Date Issued 07/02/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	CORNERSTONE - STAGE 4	Date tested	05/02/18
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:59
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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	1.79	1.80	1.81	1.73	1.77	1.81
Field moisture content	%	30.0	30.9	27.0	31.3	31.9	28.9

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	1	0	0	0
Peak Converted Wet Density	t/m ³	1.79	1.83	1.80	1.74	1.76	1.85
Adjusted Peak Converted Wet Density	t/m ³	-	-	1.82	-	-	-
Optimum Moisture Content	%	32.5	31.5	29.5	33.5	34.5	31.0

Moisture Variation From Optimum Moisture Content	2.5% dry	0.5% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	100.0	98.5	99.5	99.5	101.0	98.0
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Material description

No 7 - 12 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 18071
 Report No 18071/R003
 Date Issued 07/02/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	CORNERSTONE - STAGE 4	Date tested	05/02/18
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:45
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	-	-	-	-	-
Location	REFER TO FIGURE 1					
Approximate depth below FSL						
Measurement depth	mm	175	-	-	-	-
Field wet density	t/m ³	1.71	-	-	-	-
Field moisture content	%	30.9	-	-	-	-

Test procedure AS 1289.5.7.1

Test No	13	-	-	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	-	-	-	-
Percent of oversize material	wet	0	-	-	-	-
Peak Converted Wet Density	t/m ³	1.75	-	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	33.0	-	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	-	-	-	-	-
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Density Ratio (R _{HD})	%	98.0	-	-	-	-
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Material description

No 13 - 13 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