



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

28th September 2017

Our Reference: 17530:NB035

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CORNERSTONE – STAGE 7, WYNDHAM VALE**

Please find attached our Report Nos 17530/R001 to 17530/R002 which relate to the field density testing that was conducted at the filled medium density allotments of the above subdivision. The level 1 inspections and associated field density testing was conducted in mid-September 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).

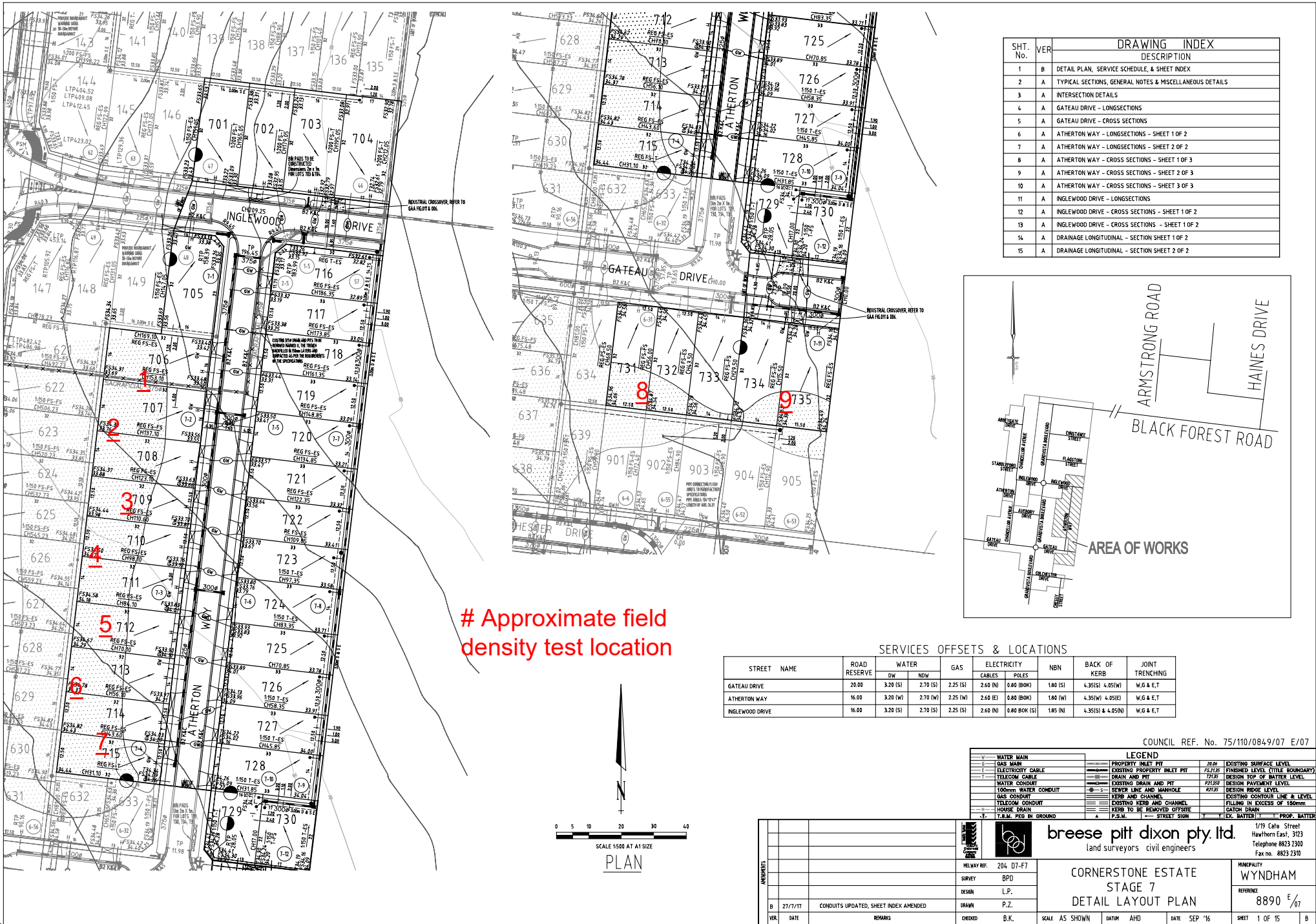
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

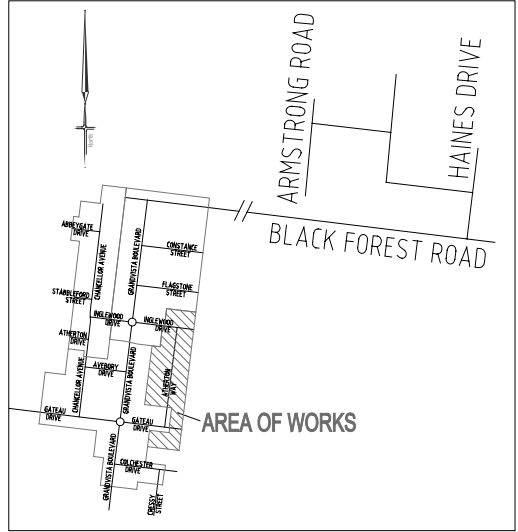
A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a faint circular stamp.

Nick Brock

Figure 1



SHT. No.	VER	DRAWING INDEX DESCRIPTION
1	B	DETAIL PLAN, SERVICE SCHEDULE, & SHEET INDEX
2	A	TYPICAL SECTIONS, GENERAL NOTES & MISCELLANEOUS DETAILS
3	A	INTERSECTION DETAILS
4	A	GATEAU DRIVE - LONGSECTIONS
5	A	GATEAU DRIVE - CROSS SECTIONS
6	A	ATHERTON WAY - LONGSECTIONS - SHEET 1 OF 2
7	A	ATHERTON WAY - LONGSECTIONS - SHEET 2 OF 2
8	A	ATHERTON WAY - CROSS SECTIONS - SHEET 1 OF 3
9	A	ATHERTON WAY - CROSS SECTIONS - SHEET 2 OF 3
10	A	ATHERTON WAY - CROSS SECTIONS - SHEET 3 OF 3
11	A	INGLEWOOD DRIVE - LONGSECTIONS
12	A	INGLEWOOD DRIVE - CROSS SECTIONS - SHEET 1 OF 2
13	A	INGLEWOOD DRIVE - CROSS SECTIONS - SHEET 2 OF 2
14	A	DRAINAGE LONGITUDINAL - SECTION SHEET 1 OF 2
15	A	DRAINAGE LONGITUDINAL - SECTION SHEET 2 OF 2



Approximate field density test location

STREET NAME	ROAD RESERVE	WATER		GAS	ELECTRICITY		HBN	BACK OF KERB	JOINT TRENCHING
		DW	NDW		CABLES	POLES			
GATEAU DRIVE	20.00	3.20 (S)	2.70 (S)	2.25 (S)	2.60 (N)	0.80 (BK)	1.80 (S)	4.35(S) 4.95(W)	W.G & E.T
ATHERTON WAY	16.00	3.20 (W)	2.70 (W)	2.25 (W)	2.60 (E)	0.80 (BK)	1.80 (W)	4.35(W) 4.95(S)	W.G & E.T
INGLEWOOD DRIVE	16.00	3.20 (S)	2.70 (S)	2.25 (S)	2.60 (N)	0.80 (BK (S))	1.85 (N)	4.35(S) & 4.95(N)	W.G & E.T

COUNCIL REF. No. 75/110/0849/07 E/07

LEGEND					
W	WATER MAIN	—	PROPERTY INLET PIT	20.00	EXISTING SURFACE LEVEL
G	GAS MAIN	—	EXISTING PROPERTY INLET PIT	75.2150	FINISHED LEVEL (TITLE BOUNDARY)
E	ELECTRICITY CABLE	—	DRAIN AND PIT	72.15	DESIGN TOP OF BATTERY LEVEL
T	TELECOM CABLE	—	EXISTING DRAIN AND PIT	72.150	DESIGN PAVEMENT LEVEL
W	WATER CONDUIT	—	1500mm WATER CONDUIT	92.75	DESIGN RIGID LEVEL
—	—	—	KERB AND CHANNEL	—	EXISTING CONTOUR LINE & LEVEL
—	—	—	TELECOM CONDUIT	—	EXISTING KERB AND CHANNEL
—	—	—	HOUSE DRAIN	—	FILLING IN EXCESS OF 150mm
—	—	—	T.B.M. PEG IN GROUND	—	CATCH DRAIN
—	—	—	—	—	EX. BATTERY
—	—	—	—	—	PROP. BATTERY

breese pitt dixon pty. ltd.
land surveyors civil engineers

1/19 Cafe Street
Hawthorn East, 3123
Telephone 8623 2300
Fax no. 8623 2310

MELWAY REF: 204 D7-F7

SURVEY: BPD

DESIGN: L.P.

DRAWN: P.Z.

CHECKED: B.K.

CORNERSTONE ESTATE
STAGE 7
DETAIL LAYOUT PLAN

MUNICIPALITY: WYNDHAM

REFERENCE: 8890 E/07

NO.	DATE	REMARKS	CHECKED	SCALE	DATUM	AHD	DATE	SHEET
B	27/7/17	CONDUITS UPDATED, SHEET INDEX AMENDED		SCALE AS SHOWN	DATUM	AHD	SEP '16	1 OF 15



COMPACTION ASSESSMENT

Job No 17530
 Report No 17530/R001
 Date Issued 28/09/2017

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by AG
 Date tested 20/09/17
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project CORNERSTONE - STAGE 7
 Location WYNDHAM VALE

Feature EARTHWORKS *Layer thickness* 200 mm *Time:* 11:33

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	1.90	1.95	1.89	1.94	1.89	1.92
Field moisture content	%	21.7	18.4	18.7	17.9	20.4	20.1

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	7	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.97	1.92	1.94	1.94	1.95	1.92
Adjusted Peak Converted Wet Density	t/m ³	2.00	-	-	-	-	-
Optimum Moisture Content	%	22.0	20.5	21.5	20.0	21.5	23.0

Moisture Variation From Optimum Moisture Content	0.5% dry	2.0% dry	2.5% dry	2.0% dry	1.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	95.0	101.5	97.5	100.0	97.0	99.5
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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 17530
 Report No 17530/R002
 Date Issued 26/09/2017

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by AG
 Date tested 20/09/17
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project CORNERSTONE - STAGE 7
 Location WYNDHAM VALE

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:37

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		7	8	9	-	-	-
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	1.86	1.84	1.84	-	-	-
Field moisture content	%	20.9	21.7	23.5	-	-	-

Test procedure AS 1289.5.7.1

Test No		7	8	9	-	-	-
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	1.85	1.90	1.91	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	23.0	24.5	26.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	100.5	96.5	96.5	-	-	-
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Material description

No 7 - 9 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