



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

6th October 2021

Our Reference: 21517:NB1059

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CORNERSTONE – STAGE 17 (WYNDHAM VALE)**

Please find attached our Report No's 21517/R001 to 21517/R005 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 July 2021 and was completed in August 2021.

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).

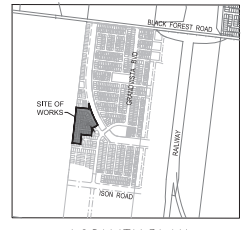
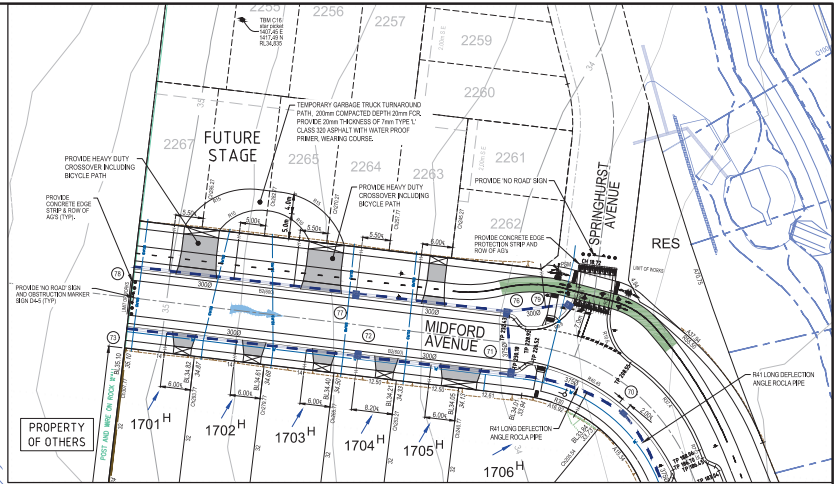
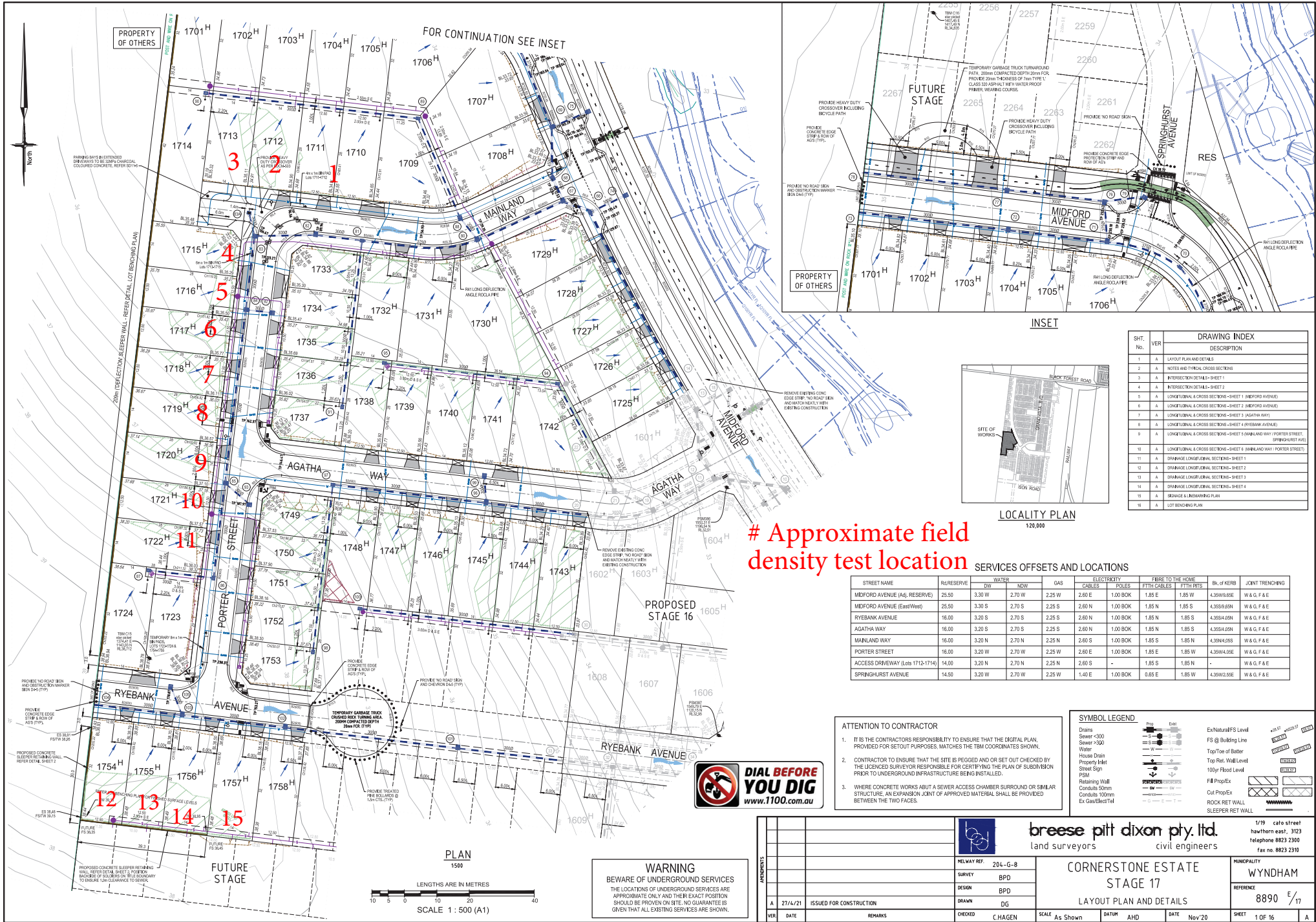
Please contact the undersigned if you require any additional information.

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
1	A	LAYOUT PLAN AND DETAILS
2	A	NOTES AND TYPICAL CROSS SECTIONS
3	A	INTERSECTION DETAILS - SHEET 1
4	A	INTERSECTION DETAILS - SHEET 2
5	A	LONGITUDINAL & CROSS SECTION - SHEET 1 (MIDFORD AVENUE)
6	A	LONGITUDINAL & CROSS SECTION - SHEET 2 (MIDFORD AVENUE)
7	A	LONGITUDINAL & CROSS SECTION - SHEET 3 (AGATHA WAY)
8	A	LONGITUDINAL & CROSS SECTION - SHEET 4 (RYEBANK AVENUE)
9	A	LONGITUDINAL & CROSS SECTION - SHEET 5 (MAINLAND WAY / PORTER STREET - SPRINGHURST AVE)
10	A	LONGITUDINAL & CROSS SECTION - SHEET 6 (MAINLAND WAY / PORTER STREET)
11	A	CHANGE LONGITUDINAL SECTIONS - SHEET 1
12	A	CHANGE LONGITUDINAL SECTIONS - SHEET 2
13	A	CHANGE LONGITUDINAL SECTIONS - SHEET 3
14	A	CHANGE LONGITUDINAL SECTIONS - SHEET 4
15	A	CHANGE & SUBMITTING PLAN
16	A	LOT BOUNDARY PLAN

Approximate field density test location

STREET NAME	RESERVE	WATER			GAS		ELECTRICITY		FIBRE TO THE HOME		Bk. of KERB	JOINT TRENCHING
		OW	NOW	NEW	2.60 E	1.20 BOK	2.60 E	1.00 BOK	1.85 N	1.85 S		
MIDFORD AVENUE (AG, RESERVE)	25.50	3.30 W	2.70 W	2.25 W	2.60 E	1.20 BOK	2.60 E	1.85 E	1.85 S	4.35W/0.6E	W & G, F & E	
MIDFORD AVENUE (Esbv/Whv)	25.50	3.30 S	2.70 S	2.25 S	2.60 N	1.00 BOK	2.60 N	1.85 N	1.85 S	4.35S/0.6N	W & G, F & E	
RYEBANK AVENUE	16.00	3.20 S	2.70 S	2.25 S	2.60 N	1.00 BOK	2.60 N	1.85 N	1.85 S	4.35S/0.6N	W & G, F & E	
AGATHA WAY	16.00	3.20 S	2.70 S	2.25 S	2.60 N	1.00 BOK	2.60 N	1.85 N	1.85 S	4.35S/0.6N	W & G, F & E	
MAINLAND WAY	16.00	3.20 N	2.70 N	2.25 N	2.60 S	1.00 BOK	2.60 S	1.85 S	1.85 N	4.35N/0.6S	W & G, F & E	
PORTER STREET	16.00	3.20 W	2.70 W	2.25 W	2.60 E	1.00 BOK	2.60 E	1.85 E	1.85 W	4.35W/0.6E	W & G, F & E	
ACCESS DRIVEWAY (Lots 1712-1714)	14.00	3.20 N	2.70 N	2.25 N	2.60 S	-	2.60 S	1.85 S	1.85 N	-	W & G, F & E	
SPRINGHURST AVENUE	14.50	3.20 W	2.70 W	2.25 W	1.40 E	1.00 BOK	1.40 E	0.65 E	1.85 W	4.35W/0.6E	W & G, F & E	

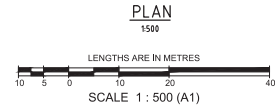
- ATTENTION TO CONTRACTOR**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.
 - CONTRACTOR TO ENSURE THAT THE SITE IS PEGGED AND OR SET OUT CHECKED BY THE LICENCED SURVEYOR RESPONSIBLE FOR CERTIFYING THE PLAN OF SUBDIVISION PRIOR TO UNDERGROUND INFRASTRUCTURE BEING INSTALLED.
 - WHERE CONCRETE WORKS ABOUT A SEWER ACCESS CHAMBER SURROUND OR SIMILAR STRUCTURE, AN EXPANSION JOINT OF APPROVED MATERIAL SHALL BE PROVIDED BETWEEN THE TWO FACES.

SYMBOL LEGEND

Drains	Ex/Natural/F.S Level
Sewer <300	FS @ Building Line
Sewer >300	Top/Toe of Batter
Water	100% Flood Level
House Drain	File Prop/Ex
Property Inlet	Cut Prop/Ex
Street Sign	ROCK RET WALL
PSM	SLEEPER RET WALL
Retaining Wall	
Consults 50mm	
Consults 100mm	
Ex Gas/Elect/Fal	



WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS 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.



breese pitt dixon pty. ltd.
land surveyors civil engineers

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

CORNERSTONE ESTATE
STAGE 17

HELWY REF: 204-G-B
SURVEY: BPD
DESIGN: BPD
DRAWN: DG

DESIGN: BPD
DRAWN: DG

LAYOUT PLAN AND DETAILS

SCALE: As Shown
DATUM: AHD
DATE: Nov 20

MUNICIPALITY: WYNDHAM
REFERENCE: 8890 E/17

SHEET 1 OF 16

1100projects\BPD\BRE Cornerstone\CAD\Drawings\Stage 17\BPM_E17_001_DET.dwg 18/11/2017 10:00:00 AM



COMPACTION ASSESSMENT

Job No 21517
 Report No 21517/R001
 Date Issued 11/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	CORNERSTONE - STAGE 17	Date tested	23/07/21
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:43
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	-	-	-
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	1.98	1.98	1.99	-	-
Field moisture content	%	30.9	30.9	31.0	-	-

Test procedure AS 1289.5.7.1

Test No	1	2	3	-	-	-
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	2.05	2.07	2.07	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	33.5	33.5	31.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	0.5% dry	-	-	-
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Density Ratio (R _{HD})	%	96.5	96.0	96.0	-	-
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Material description

No 1 - 3 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21517
Report No 21517/R002
Date Issued 28/08/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	CORNERSTONE - STAGE 17	Date tested	24/07/21
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:47
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	4	5	6	-	-	-
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	1.79	1.79	1.76	-	-
Field moisture content	%	28.7	29.5	29.7	-	-

Test procedure AS 1289.5.7.1

Test No	4	5	6	-	-	-
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	1.81	1.80	1.80	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	31.5	32.0	32.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.0	99.0	98.0	-	-
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Material description

No 4 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accredited for compliance with
ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21517
Report No 21517/R003
Date Issued 06/10/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	CORNERSTONE - STAGE 17	Date tested	26/07/21
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:27
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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	1.97	1.97	1.97	-	-
Field moisture content	%	18.4	17.2	18.6	-	-

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	2.04	2.06	2.07	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.0	19.5	18.5	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	2.5% dry	0.0%	-	-	-
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Density Ratio (R _{HD})	%	97.0	96.0	95.5	-	-
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Material description

No 7 - 9 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
Accredited for compliance with
ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21517
 Report No 21517/R004
 Date Issued 11/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	CORNERSTONE - STAGE 17	Date tested	03/08/21
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:42
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	10	11	12	-	-	-
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	1.87	1.86	1.83	-	-
Field moisture content	%	31.3	28.4	30.5	-	-

Test procedure AS 1289.5.7.1

Test No	10	11	12	-	-	-
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	1.91	1.93	1.88	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	34.0	29.0	31.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	0.5% dry	0.5% dry	-	-	-
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Density Ratio (R _{HD})	%	98.0	96.0	97.5	-	-
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Material description

No 10 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21517
 Report No 21517/R005
 Date Issued 11/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	CORNERSTONE - STAGE 17	Date tested	04/08/21
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:12
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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	1.93	1.85	1.97	-	-
Field moisture content	%	35.4	36.8	29.8	-	-

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	1.93	1.90	2.03	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	36.0	38.0	30.5	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	1.0% dry	0.5% dry	-	-	-
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Density Ratio (R _{HD})	%	100.0	97.5	97.5	-	-
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Material description

No 13 - 15 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry