



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

25th February 2020

Our Reference: 19778:NB667

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
EYNESBURY – STAGE 5B (EYNESBURY)**

Please find attached our Report No's 19778/R001 to 19778/R003 which relate to the field density testing that was conducted within the filled allotments of the above subdivision. The level 1 inspections and associated field density testing was performed in December 2019.

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).

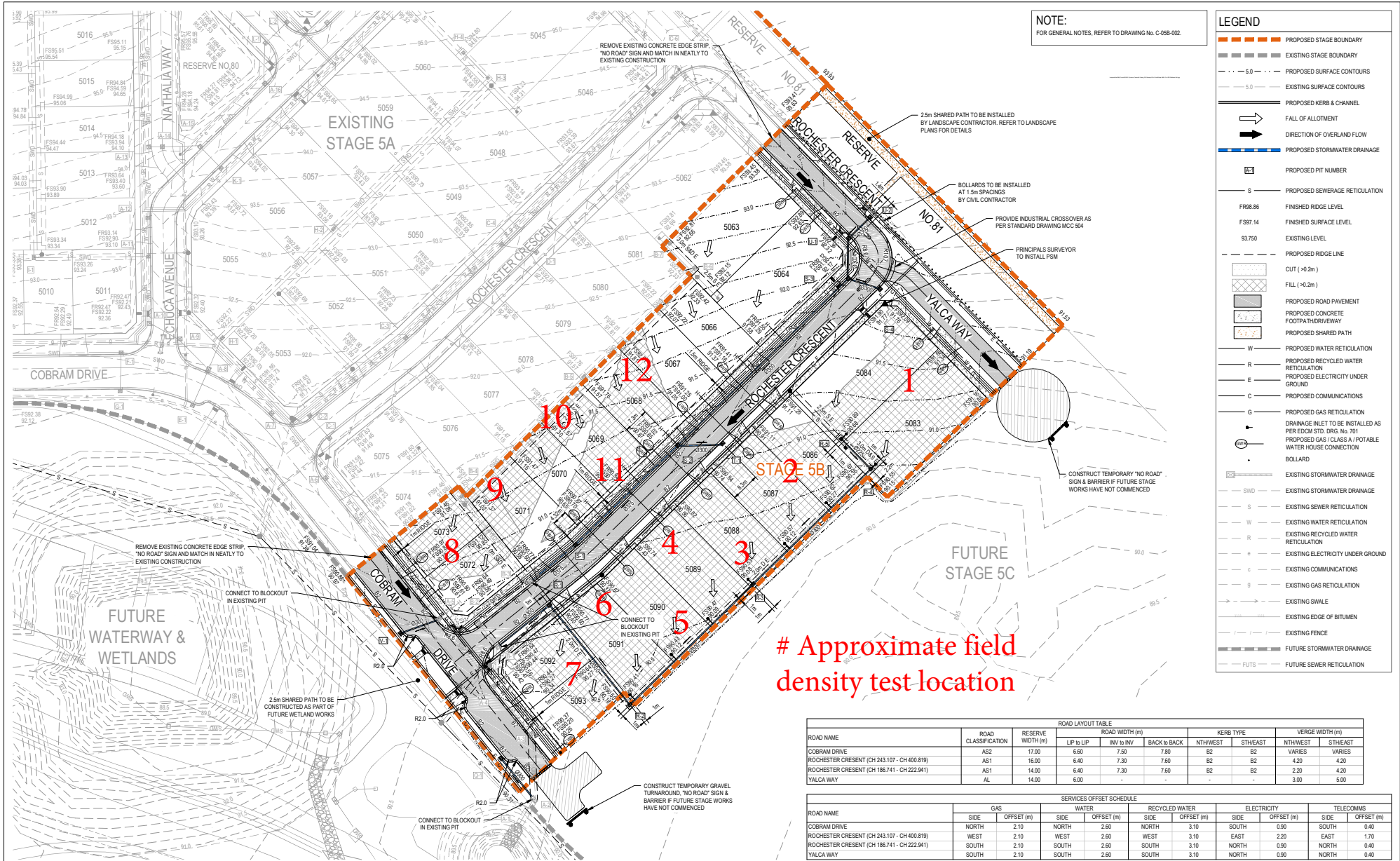
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1



Approximate field density test location

ROAD NAME	ROAD CLASSIFICATION	RESERVE WIDTH (m)	ROAD WIDTH (m)			KERB TYPE		VERGE WIDTH (m)	
			LIP to LIP	INV to INV	BACK to BACK	NTHWEST	STHEAST	NTHWEST	STHEAST
COBRAM DRIVE	AS2	17.00	6.60	7.50	7.80	B2	B2	VARIES	VARIES
ROCHESTER CRESENT (CH 243.107 - CH 400.819)	AS1	16.00	6.40	7.30	7.60	B2	B2	4.20	4.20
ROCHESTER CRESENT (CH 186.741 - CH 222.941)	AS1	14.00	6.40	7.30	7.60	B2	B2	2.20	4.20
YALCA WAY	AL	14.00	6.00	-	-	-	-	3.00	5.00

ROAD NAME	GAS		WATER		RECYCLED WATER		ELECTRICITY		TELECOMMS	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
COBRAM DRIVE	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	0.90	SOUTH	0.40
ROCHESTER CRESENT (CH 243.107 - CH 400.819)	WEST	2.10	WEST	2.60	WEST	3.10	EAST	2.20	EAST	1.70
ROCHESTER CRESENT (CH 186.741 - CH 222.941)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	0.90	NORTH	0.40
YALCA WAY	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	0.90	NORTH	0.40

Scale	1 : 500																																					
North Arrow																																						
Graphic Scale	0 5 10 20 30 40 50m																																					
Revision Log	<table border="1"> <thead> <tr> <th>Issue</th> <th>Description</th> <th>By</th> <th>Clk</th> <th>PM</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>ISSUED FOR CONSTRUCTION</td> <td>WB</td> <td>ZS</td> <td>SE</td> <td>18.11.19</td> </tr> <tr> <td>04</td> <td>FOOTPATH FACILITIES REVISED</td> <td>WB</td> <td>ZS</td> <td>SE</td> <td>09.10.19</td> </tr> <tr> <td>03</td> <td>RESPONSE TO ADDITIONAL COUNCIL COMMENTS</td> <td>WB</td> <td>ZS</td> <td>SE</td> <td>13.09.19</td> </tr> <tr> <td>02</td> <td>RESPONSE TO COUNCIL COMMENTS</td> <td>MD</td> <td>ZS</td> <td>SE</td> <td>26.07.19</td> </tr> <tr> <td>01</td> <td>ISSUED TO COUNCIL FOR APPROVAL</td> <td>MD</td> <td>ZS</td> <td>SE</td> <td>31.05.19</td> </tr> </tbody> </table>		Issue	Description	By	Clk	PM	Date	A	ISSUED FOR CONSTRUCTION	WB	ZS	SE	18.11.19	04	FOOTPATH FACILITIES REVISED	WB	ZS	SE	09.10.19	03	RESPONSE TO ADDITIONAL COUNCIL COMMENTS	WB	ZS	SE	13.09.19	02	RESPONSE TO COUNCIL COMMENTS	MD	ZS	SE	26.07.19	01	ISSUED TO COUNCIL FOR APPROVAL	MD	ZS	SE	31.05.19
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Planner

Client

Filename: C-058-220-10029435-Roadworks&DrainagePlan.dwg

Status: FOR CONSTRUCTION

Verifier: Z. STROGUSZ

Scales: 1:500

Original Size: A1

Height Datum: AHD

Grid: MGA

Project: EYNSBURY TOWNSHIP STAGE 5B

Title: ROADWORKS AND DRAINAGE PLAN

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ARCADIS Australia Pacific Pty Limited
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Drawing No: C-058-220-10029435
Project No: 10029435
Issue: A



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 19778
 Report No 19778/R001
 Date Issued 21/02/2020

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 5B	Date tested	12/12/19
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:04
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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/m³	1.77	1.74	1.89	1.75	1.84	1.92
Field moisture content %	25.5	26.1	25.6	24.1	23.6	23.4

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	19.0
Percent of oversize material wet	0	0	0	5	2	0
Peak Converted Wet Density t/m³	1.85	1.88	1.89	1.91	1.89	1.92
Adjusted Peak Converted Wet Density t/m³	-	-	-	1.93	1.90	-
Optimum Moisture Content %	27.5	28.5	28.5	26.5	26.0	26.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	95.5	92.5	100.5	90.5	97.0	100.5
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Material description

No 1 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 19778
 Report No 19778/R002
 Date Issued 21/02/2020

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 5B	Date tested	13/12/19
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:05
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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	1.94	1.86	1.85	-	-
Field moisture content	%	23.6	26.9	27.0	-	-

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	1.93	1.84	1.86	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	28.0	29.0	29.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	100.5	101.0	99.5	-	-
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Material description

No 7 - 9 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 19778
 Report No 19778/R003
 Date Issued 23/01/2020

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 5B	Date tested	17/12/19
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:51
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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	1.82	1.80	1.84	-	-
Field moisture content	%	25.8	27.6	24.5	-	-

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	6	-	-
Peak Converted Wet Density	t/m ³	1.83	1.81	1.80	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	1.83	-	-
Optimum Moisture Content	%	28.5	30.0	26.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	99.5	99.5	100.5	-	-
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Material description

No 10 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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