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: 19777:NB666

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

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

Please find attached our Report No's 19777/R001 and 19777/R002 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).

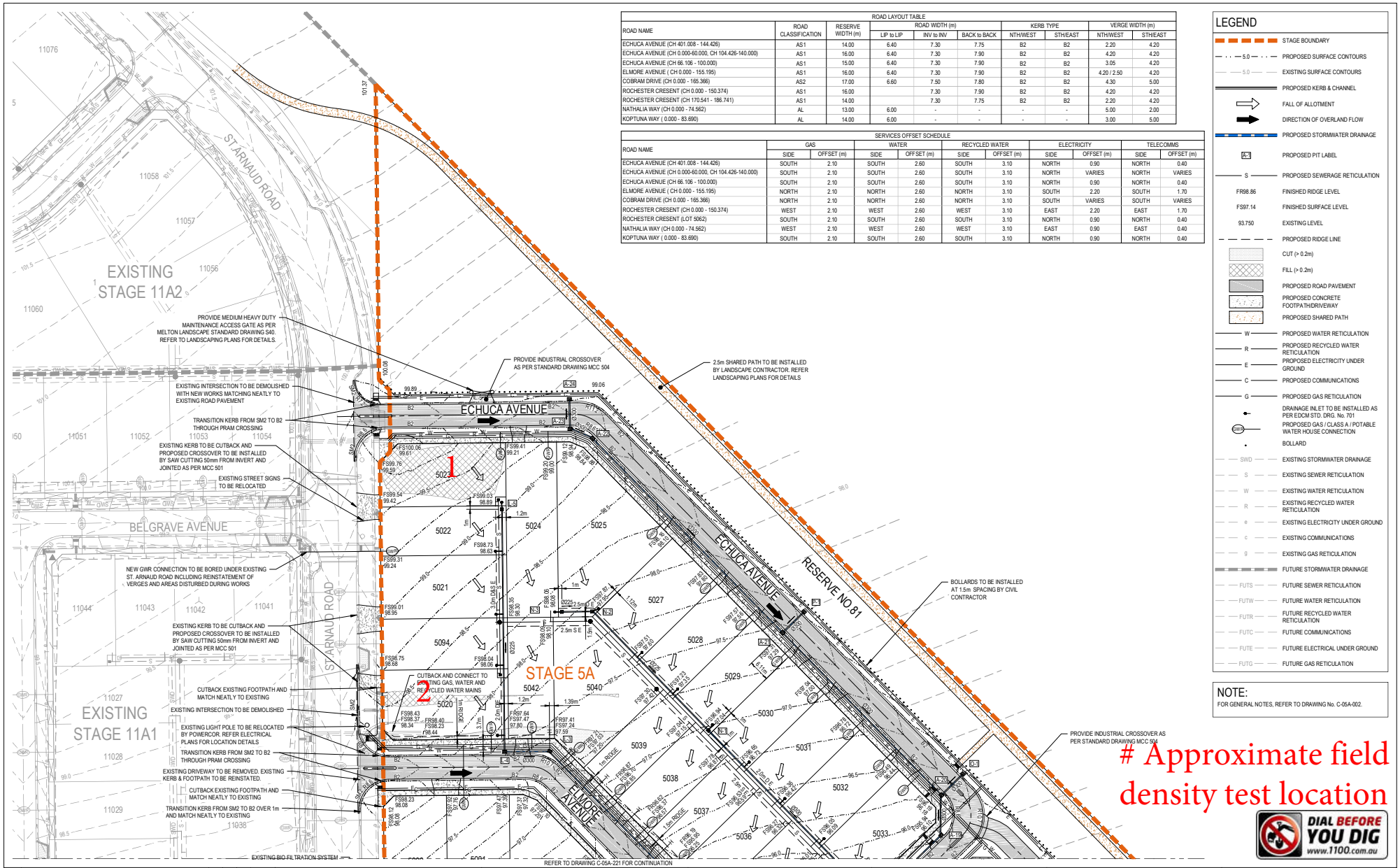
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1 (1 of 2)



ROAD LAYOUT TABLE

ROAD NAME	ROAD CLASSIFICATION	RESERVE WIDTH (m)	ROAD WIDTH (m)			KERB TYPE		VERGE WIDTH (m)	
			LIP to LIP	INV to INV	BACK to BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST
ECHUCA AVENUE (CH 401.008 - 144.426)	AS1	14.00	6.40	7.30	7.75	B2	B2	2.20	4.20
ECHUCA AVENUE (CH 0.000-60.000, CH 104.426-140.000)	AS1	16.00	6.40	7.30	7.90	B2	B2	4.20	4.20
ECHUCA AVENUE (CH 66.106 - 100.000)	AS1	15.00	6.40	7.30	7.90	B2	B2	3.05	4.20
ELMORE AVENUE (CH 0.000 - 155.195)	AS1	16.00	6.40	7.30	7.90	B2	B2	4.20 / 2.50	4.20
COBRAM DRIVE (CH 0.000 - 165.366)	AS2	17.00	6.60	7.50	7.80	B2	B2	4.30	5.00
ROCHESTER CRESENT (CH 0.000 - 150.374)	AS1	16.00		7.30	7.90	B2	B2	4.20	4.20
ROCHESTER CRESENT (CH 170.541 - 186.741)	AS1	14.00		7.30	7.75	B2	B2	2.20	4.20
NATHALIA WAY (CH 0.000 - 74.562)	AL	13.00	6.00	-	-	-	-	5.00	2.00
KOPTUNA WAY (0.000 - 83.690)	AL	14.00	6.00	-	-	-	-	3.00	5.00

SERVICES OFFSET SCHEDULE

ROAD NAME	GAS		WATER		RECYCLED WATER		ELECTRICITY		TELECOMMS	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
ECHUCA AVENUE (CH 401.008 - 144.426)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	0.90	NORTH	0.40
ECHUCA AVENUE (CH 0.000-60.000, CH 104.426-140.000)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	VARIES	NORTH	VARIES
ECHUCA AVENUE (CH 66.106 - 100.000)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	0.90	NORTH	0.40
ELMORE AVENUE (CH 0.000 - 155.195)	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	2.20	SOUTH	1.70
COBRAM DRIVE (CH 0.000 - 165.366)	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	VARIES	SOUTH	VARIES
ROCHESTER CRESENT (CH 0.000 - 150.374)	WEST	2.10	WEST	2.60	WEST	3.10	EAST	2.20	EAST	1.70
ROCHESTER CRESENT (LOT 5062)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	0.90	NORTH	0.40
NATHALIA WAY (CH 0.000 - 74.562)	WEST	2.10	WEST	2.60	WEST	3.10	EAST	0.90	EAST	0.40
KOPTUNA WAY (0.000 - 83.690)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	0.90	NORTH	0.40

LEGEND

- STAGE BOUNDARY
- PROPOSED SURFACE CONTOURS
- EXISTING SURFACE CONTOURS
- PROPOSED KERB & CHANNEL
- FALL OF ALLOTMENT
- DIRECTION OF OVERLAND FLOW
- PROPOSED STORMWATER DRAINAGE
- PROPOSED PIT LABEL
- PROPOSED SEWERAGE RETICULATION
- FR98.86 FINISHED RIDGE LEVEL
- FS97.14 FINISHED SURFACE LEVEL
- 93.750 EXISTING LEVEL
- PROPOSED RIDGE LINE
- CUT (> 0.2m)
- FILL (> 0.2m)
- PROPOSED ROAD PAVEMENT
- PROPOSED CONCRETE FOOTPATH/DRIVEWAY
- PROPOSED SHARED PATH
- PROPOSED WATER RETICULATION
- PROPOSED RECYCLED WATER RETICULATION
- PROPOSED ELECTRICITY UNDER GROUND
- PROPOSED COMMUNICATIONS
- PROPOSED GAS RETICULATION
- DRAINAGE INLET TO BE INSTALLED AS PER EDCM STD. DRG. No. 701
- PROPOSED GAS / CLASS A / POTABLE WATER HOUSE CONNECTION
- BOLLARD
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER RETICULATION
- EXISTING WATER RETICULATION
- EXISTING RECYCLED WATER RETICULATION
- EXISTING ELECTRICITY UNDER GROUND
- EXISTING COMMUNICATIONS
- EXISTING GAS RETICULATION
- FUTURE STORMWATER DRAINAGE
- FUTURE SEWER RETICULATION
- FUTURE WATER RETICULATION
- FUTURE RECYCLED WATER RETICULATION
- FUTURE COMMUNICATIONS
- FUTURE ELECTRICAL UNDER GROUND
- FUTURE GAS RETICULATION

NOTE:
FOR GENERAL NOTES, REFER TO DRAWING No. C-05A-002.

Issue	Description	By	Ckd	PM	Date
A	ISSUED FOR CONSTRUCTION	WB	ZS	SE	18.11.19
05	UPDATED EASEMENT ON LOT 5020, 5045 & 5046	WB	ZS	SE	17.10.19
04	FOOTPATH TACTILES 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

100mm on Original

Scale: 1 : 500 (0 5 10 20 30 40 50m)

Planner: RobertsDay planning·design·place

Client: RESIMAX GROUP

Filename C-05a-220-10029435-Roadworks&DrainagePlan.dwg

Status: FOR CONSTRUCTION
Verifier: Z.STROGUSZ
Scales: 1:500
Original Size: A1
Height Datum: AHD
Grid: MGA
Original Issue Signatures
Drawn W.BUMAGAT
Designed J.ROCK
Project Manager S.EISEL
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Project: EYNESBURY TOWNSHIP STAGE 5A

Title: ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 2

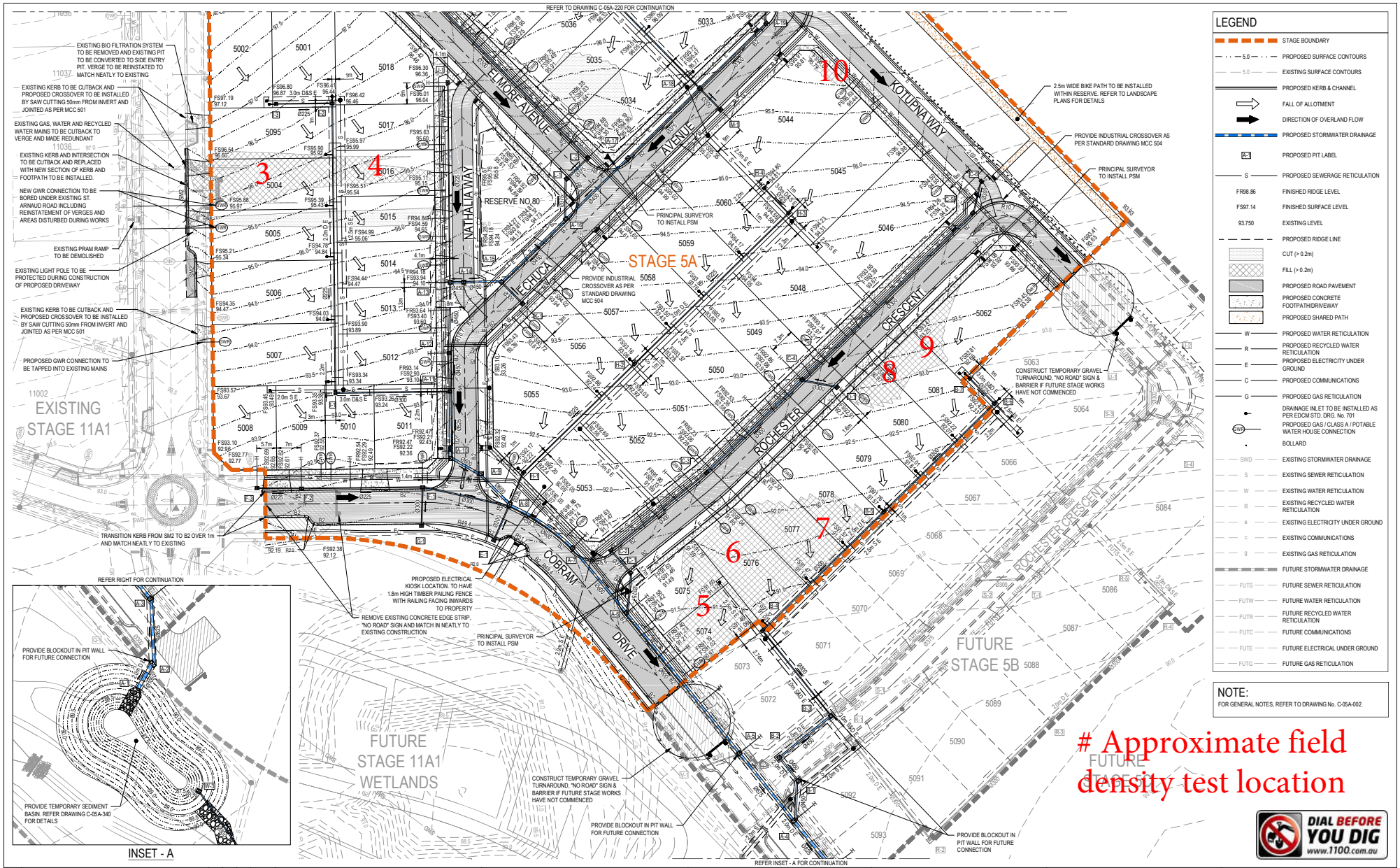
ARCADIS
Arcadis Australia Pacific Pty Limited
Level 32, 140 William Street
Melbourne VIC 3000
ABN 76 104 485 289
Tel No: +61 3 8623 4000
www.arcadis.com

Drawing No. C-05A-220 — Project No. 10029435 — Issue A

DIAL BEFORE YOU DIG www.1100.com.au

Last Saved: WBMN1953 Date Plotted: 14 Nov 2019 - 03:56PM File Name: K:\10029435 - Eynesbury Township\Id-working_\d02-drawings\C-Civil\D-Final\h-stage 05a\b-cc Or Opw\c-05a-220-10029435-Roadworks&DrainagePlan.dwg V1

FIGURE 1 (2 of 2)



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02	RESPONSE TO COUNCIL COMMENTS	MD	ZS	SE	26.07.19
01	ISSUED TO COUNCIL FOR APPROVAL	MD	ZS	SE	31.05.19

Scale: 1 : 500 (0 5 10 20 30 40 50m)

Planner: RobertsDay planning·design·place

Client: RESIMAX GROUP

Filename C-05a-220-10029435-Roadworks&DrainagePlan.dwg

Status: FOR CONSTRUCTION

Verifier: Z.STROGUSZ

Scales	1:500	Original Issue Signatures
Original Size	A1	Drawn W.BUMAGAT; Designed J.ROCK
Height Datum	AHD	Project Manager S.EISEL
Grid	MGA	© Copyright reserved

Project: EYNESBURY TOWNSHIP STAGE 5A

Title: ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 2 OF 2

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 32, 140 William Street
Melbourne VIC 3000
ABN 76 104 485 289
Tel No: +61 3 8623 4000
www.arcadis.com

Drawing No.	Project No.	Issue
C-05A-221	10029435	A

Last Saved: WBMN1953 Date Plotted: 14 Nov 2019 - 03:56PM File Name: K:\10029435 - Eynesbury Township\ld-working_\d02-drawings\C-Civil\D-Final\n-stage 05a\b-cc Or Opw\c-05a-220-10029435-Roadworks&DrainagePlan.dwg

V1

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	19777
		Report No	19777/R001
		Date Issued	25/02/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	EYNESBURY - STAGE 5A	*Date tested*	17/12/19
Location	EYNESBURY	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:58

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*	1.80	1.80	1.80	1.80	1.80	1.81
Field moisture content	*%*	24.1	24.9	23.9	25.2	25.4	26.8

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	5	0
Peak Converted Wet Density	*t/m³*	1.80	1.80	1.80	1.83	1.84	1.84
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	1.87	-
Optimum Moisture Content	*%*	26.0	27.0	26.0	27.5	27.5	29.0

Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	2.0% dry	2.5% dry	2.0% dry	2.0% dry
Density Ratio (R_{HD})	*%*	**100.0**	**100.0**	**100.0**	**98.5**	**96.0**	**98.5**

Material description

No 1 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	19777
		Report No	19777/R002
		Date Issued	05/02/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	EYNESBURY - STAGE 5A	*Date tested*	18/12/19
Location	EYNESBURY	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:03

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**7**	**8**	**9**	**10**	**-**	**-**
Location		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	-	-
Field wet density	*t/m³*	1.92	1.89	1.94	1.87	-	-
Field moisture content	*%*	21.7	22.5	21.6	23.4	-	-

Test procedure AS 1289.5.7.1

Test No		7	8	9	10	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	-	-
Percent of oversize material	*wet*	0	0	0	0	-	-
Peak Converted Wet Density	*t/m³*	1.96	1.96	2.01	1.92	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	23.0	24.5	23.5	25.0	-	-

Moisture Variation From Optimum Moisture Content		1.5% dry	2.0% dry	2.0% dry	1.5% dry	-	-

Density Ratio (R_{HD})	*%*	**98.0**	**96.5**	**96.5**	**97.5**	**-**	**-**

Material description

No 7 - 10 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry