



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

6th March 2021

Our Reference: 20581:NB897

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
EYNESBURY – STAGE 8A (EYNESBURY)

Please find attached our Report No's 20581/R001 to 20581/R006 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 2020 and was completed in March 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

Nick Brock

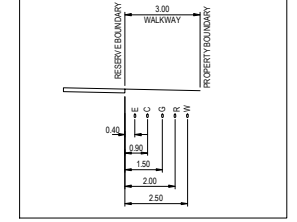
FIGURE 1 (1 of 2)

ROAD LAYOUT TABLE									
ROAD NAME	ROAD CLASSIFICATION	RESERVE WIDTH (m)	ROAD WIDTH			KERB TYPE		VERGE WIDTH(m)	
			LIP to LIP	INV to INV	BACK to BACK	NTHWEST	STHEAST	NTHWEST	STHEAST
LOGAN STREET	AS2	18.00	6.75	7.65	7.95	B2	B2	5.05	7.10
NARVARRE ROAD	AS1	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
CROWLANDS CIRCUIT EAST (LOTS 8071-8118)	AS1	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
CROWLANDS CIRCUIT WEST (LOTS 8072-8097)	AS1	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
CROWLANDS CIRCUIT NORTH (LOTS 8031-8059)	AP	14.00	6.60	7.50	7.80	B2	B2	1.25	5.35
LANDSBOROUGH LANE	AL	8.00	6.00	-	-	-	-	1.00	1.00
AMPHITHEATRE STREET	AP	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
JOEL WAY	AP	14.00	6.60	7.50	7.80	B2	B2	0.90	5.60
MOONAMBEL ROAD	AS1	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
GREENHILL ROAD	AS2	24.00	9.90	10.40	10.70	B2	B2	6.80	6.80
EXTENDED DRIVEWAY (LOTS 8048-8053)	AL	7.50	5.50	-	-	-	-	-	2.00
WANYARRA LANE	AL	8.00	6.00	-	-	-	-	1.00	1.00

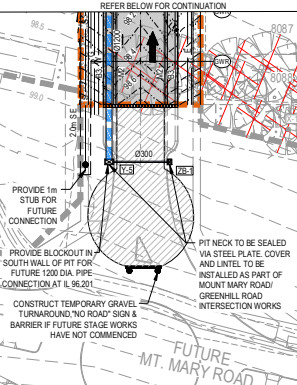
SERVICES OFFSET SCHEDULE										
ROAD NAME	GAS		WATER		RECYCLED WATER		ELECTRICITY		TELECOMMS	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
LOGAN STREET	WEST	2.10	WEST	3.10	WEST	2.60	EAST	2.60	EAST	1.85
NARVARRE ROAD	NORTH	1.80	NORTH	2.80	NORTH	2.30	SOUTH	2.40	SOUTH	1.80
CROWLANDS CIRCUIT EAST (LOTS 8071-8118)	WEST	1.80	WEST	2.80	WEST	2.30	EAST	2.50	EAST	1.85
CROWLANDS CIRCUIT WEST (LOTS 8072-8097)	EAST	1.80	EAST	2.80	EAST	2.30	WEST	2.40	WEST	1.80
CROWLANDS CIRCUIT NORTH (LOTS 8031-8059)	SOUTH	1.80	SOUTH	2.80	SOUTH	2.30	SOUTH	3.80	SOUTH	1.00
AMPHITHEATRE STREET	EAST	1.80	EAST	2.80	EAST	2.30	WEST	2.45	WEST	1.80
JOEL WAY	SOUTH	1.80	SOUTH	2.80	SOUTH	2.30	SOUTH	4.30	SOUTH	3.40
MOONAMBEL ROAD	NORTH	1.80	NORTH	2.80	NORTH	2.30	SOUTH	2.55	SOUTH	1.80
GREENHILL ROAD	EAST	1.80	EAST	2.80	EAST	2.30	WEST	2.60	WEST	1.85
EXTENDED DRIVEWAY (LOTS 8048-8053)	SOUTH	0.70	SOUTH	1.50	SOUTH	1.10	NORTH	1.00	NORTH	0.50
LAMPLOUGH WALK	SOUTH	2.50	SOUTH	1.50	SOUTH	2.00	SOUTH	0.40	SOUTH	0.90
LANDSBOROUGH LANE (MC08)	-	-	-	-	-	-	SOUTH	0.50	-	-
WANYARRA LANE	-	-	-	-	-	-	SOUTH	0.50	-	-

LEGEND

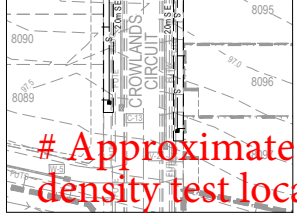
- PROPOSED STAGE BOUNDARY
- PROPOSED DESIGN CONTOURS
- PROPOSED KERBS & CHANNEL
- FALL OF ALLOCATION
- DIRECTION OF OVERLAND FLOW
- PROPOSED STORMWATER DRAINAGE
- PROPOSED PIT LABEL
- PROPOSED SEWERAGE RETICULATION
- PROPOSED WATER RETICULATION
- PROPOSED RECYCLED WATER RETICULATION
- PROPOSED ELECTRICITY UNDER GROUND
- PROPOSED COMMUNICATIONS
- PROPOSED GAS RETICULATION
- PROPOSED DRAINAGE INLET
- PROPOSED CONCRETE FOOTPATH/DRIVEWAY
- PROPOSED SHARED PATH
- PROPOSED ROAD PAVEMENT
- PROPOSED GAS / CLASS A / POTABLE WATER HOUSE CONNECTION
- BOLLARD
- FR88.86 FINISHED ROAD LEVEL
- FS87.14 FINISHED SURFACE LEVEL
- TW88.16 TOP OF WALL LEVEL
- BW88.16 BOTTOM OF WALL LEVEL
- 93.750 EXISTING SURFACE LEVEL
- PROPOSED RETAINING WALL
- PROPOSED RIDGE LINE
- CUT (> 0.2m)
- FILL (> 0.2m)
- EXISTING STAGE BOUNDARY
- EXISTING STAGE CONTOURS
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER RETICULATION
- EXISTING WATER RETICULATION
- EXISTING RECYCLED WATER RETICULATION
- EXISTING ELECTRICITY UNDER GROUND
- EXISTING COMMUNICATIONS
- EXISTING GAS RETICULATION
- EXISTING SWALE
- FUTURE STORMWATER DRAINAGE
- FUTURE SEWER RETICULATION
- FUTURE WATER RETICULATION
- FUTURE RECYCLED WATER RETICULATION
- FUTURE COMMUNICATIONS
- FUTURE ELECTRICITY UNDER GROUND
- FUTURE GAS RETICULATION
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED



LAMPLOUGH WALK - TYPICAL SECTION SCALE: 1:100

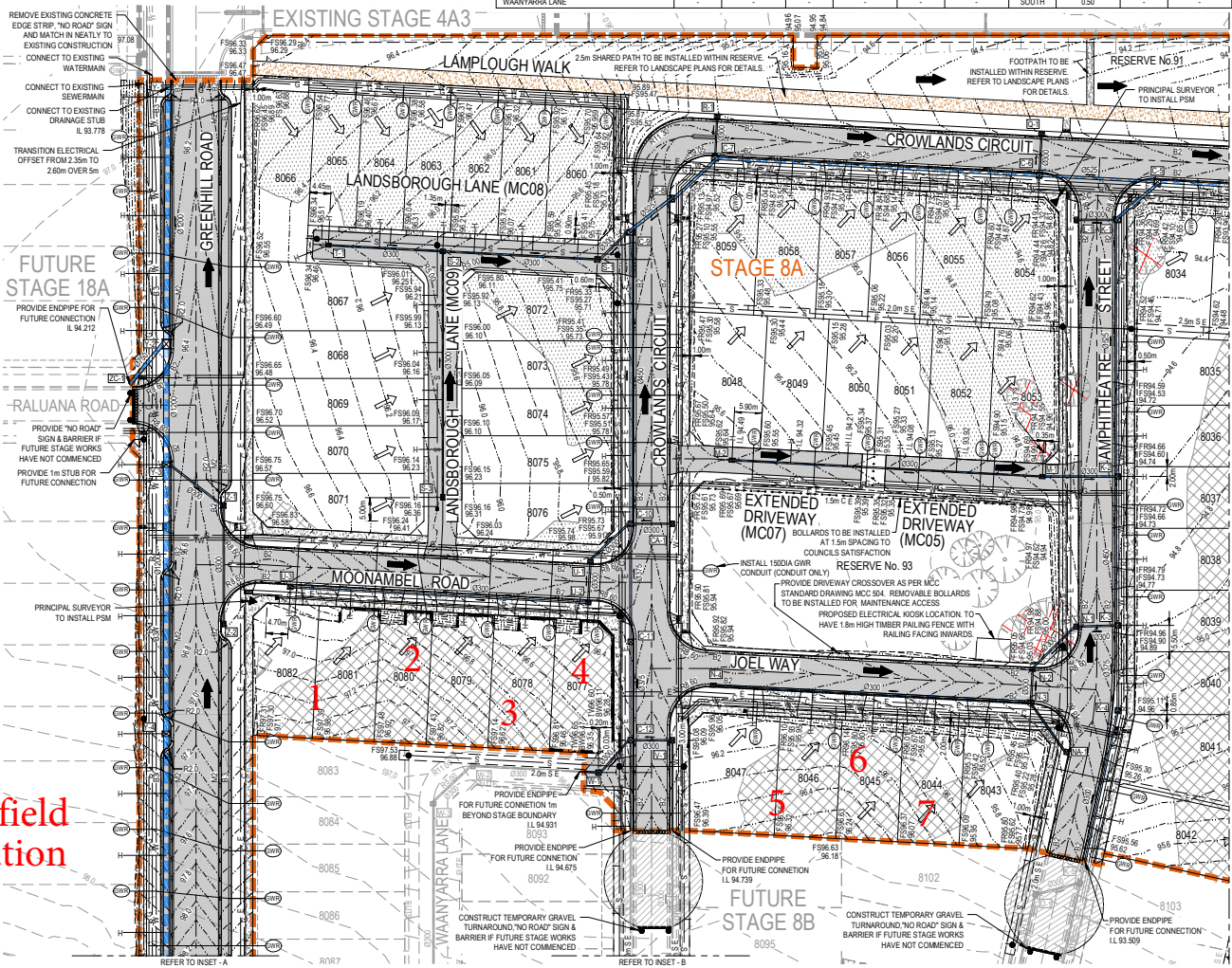


INSET - A



INSET - B

Approximate field density test location



Issue	Description	By	Chk	PI	Date
04	ISSUED FOR CONSTRUCTION	WB	ZS	SE	13.10.20
04	UPDATES TO ADDRESS COUNCIL COMMENTS	WB	ZS	SE	07.08.20
03	UPDATES TO ADDRESS COUNCIL COMMENTS	MD	ZS	SE	17.07.20
02	ISSUED FOR APPROVAL	MD	ZS	SE	24.06.20
01	ISSUED TO CLIENT FOR REVIEW	WB	ZS	SE	04.10.19

Planner: **RD RobertsDay** planning.design.place

Client: **RESIMAX GROUP**

Scale: 1:500

Filename: C:\08a-220-10029435-Roadworks&Drainage\PlanSheet.dwg

Status: **FOR CONSTRUCTION**

Verifier: **Z. STROGUSZ**

Original Issue Signatures: **AS SHOWN**

Original Size: **A1**

Height Datum: **AHD**

Grid: **MGA**

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Project: **EYNEBURY TOWNSHIP STAGE 8A**

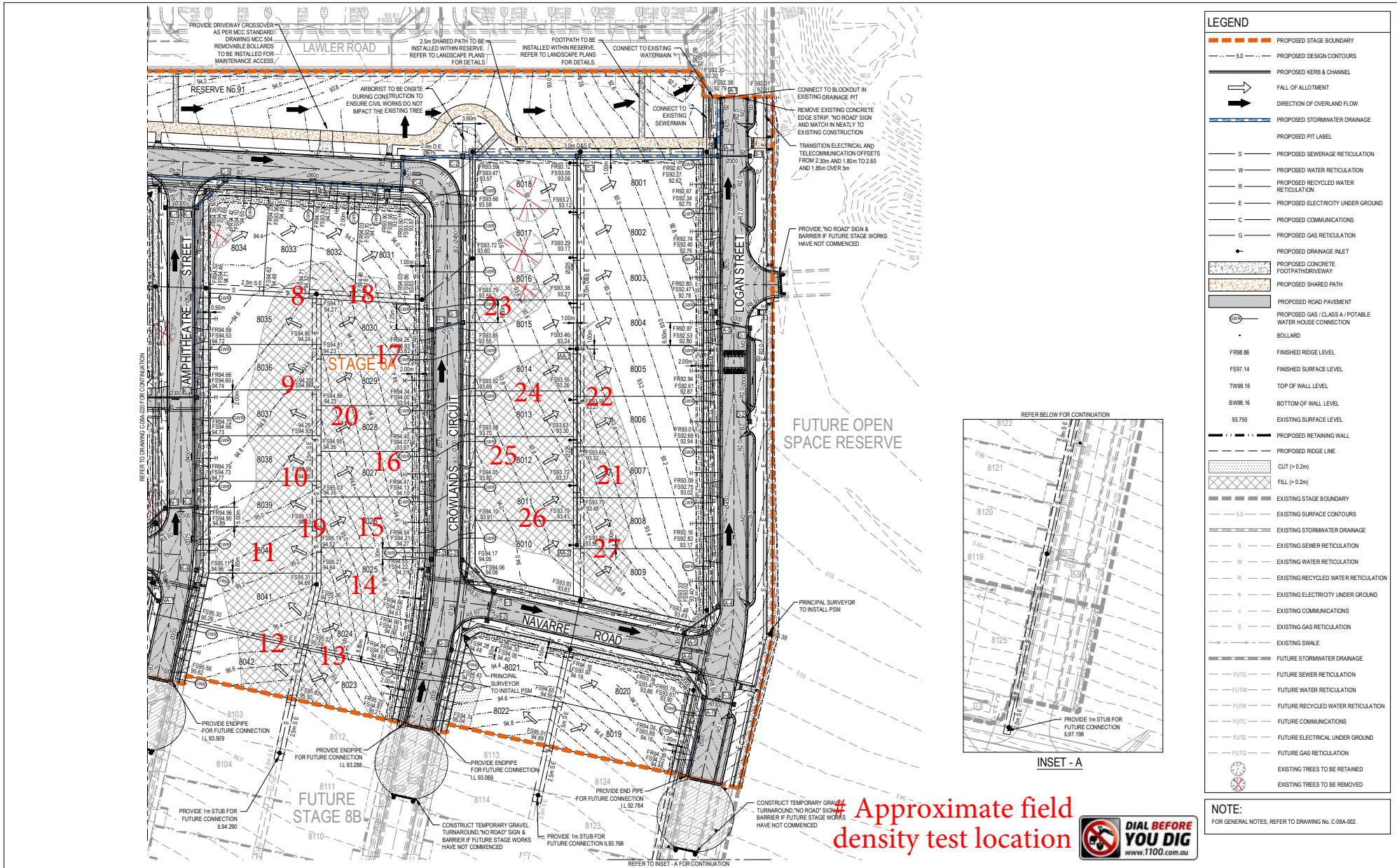
Title: **ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 2**

ARCADIS

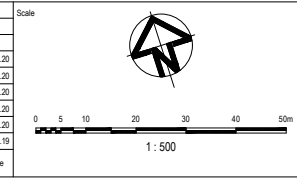
Aracis Australia Pacific Pty Limited
Level 32, 140 William Street
Melbourne VIC 3000
ABN 76 104 465 289
Tel No: +61 3 8623 4000
www.arcadis.com

Drawing No: **C-08A-220** Project No: **10029435** Issue: **A**

FIGURE 1 (2 of 2)



Issue	Description	By	Ckd	PI	Date
A	ISSUED FOR CONSTRUCTION	WB	ZS	SE	13.10.20
05	FOOTPATH IN RESERVE No 91 AMENDED	WB	ZS	SE	10.09.20
04	UPDATES TO ADDRESS COUNCIL COMMENTS	WB	ZS	SE	07.08.20
03	UPDATES TO ADDRESS COUNCIL COMMENTS	MD	ZS	SE	17.07.20
02	ISSUED FOR APPROVAL	WB	ZS	SE	24.06.20
01	ISSUED TO CLIENT FOR REVIEW	WB	ZS	SE	04.10.19



Planner

RobertsDay
planning design place

Client

RESIMAX
GROUP

Filename: C:\08a-221-10029435-Roadworks&Drainage\PlanSheet2.dwg

Status	FOR CONSTRUCTION		Project	EYNEBURY TOWNSHIP STAGE 8A
Verifier	Z.STROGUSZ		Drawn	W.BUMAGAT
Scale	1:500	Original Issue Signatures	Designed	J.PROCK
Original Size	A1	Project Manager	S.EISEL	
Height Datum	AHD	Copyright reserved		
Grid	MGA			

Project

EYNEBURY TOWNSHIP
STAGE 8A

Title

ROADWORKS AND DRAINAGE
LAYOUT PLAN SHEET 2 OF 2

ARCADIS

Aracdis Australia Pacific Pty Limited
Level 32, 140 William Street
Melbourne VIC 3000
ABN 76 104 465 289
Tel No: +61 3 8623 4000
www.arcadis.com

Drawing No. C-08A-221 - 10029435 - Issue A

Project No. 10029435

Last Saved: WBM1953 Date Plotted: 12 Oct 2020 - 02:17PM File Name: V1



COMPACTION ASSESSMENT

Job No 20581
 Report No 20581/R001
 Date Issued 03/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	EYNESBURY - STAGE 8A	Date tested	18/11/20
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	08:00
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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	1.90	1.86	1.87	-	-
Field moisture content	%	25.4	26.2	27.5	-	-

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	1.91	1.91	1.96	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	27.5	28.5	30.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.5	97.0	95.5	-	-
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Material description

No 1 - 3 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 20581
Report No 20581/R002
Date Issued 14/01/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	WS
Project	EYNESBURY - STAGE 8A	Date tested	20/11/20
Location	EYENSEBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:15
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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	1.87	1.92	1.88	-	-
Field moisture content	%	29.8	30.5	26.8	-	-

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	1.94	1.98	1.90	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	32.0	32.5	28.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	1.5% dry	-	-	-
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Density Ratio (R _{HD})	%	96.5	97.0	99.0	-	-
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Material description

No 4 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 20581
 Report No 20581/R003
 Date Issued 14/01/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	EYNESBURY - STAGE 8A	Date tested	25/11/20
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:50
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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
Field wet density	t/m ³	1.81	1.83	1.86	1.72	1.69
Field moisture content	%	24.2	24.7	24.8	25.6	24.1

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.85	1.85	1.87	1.79	1.73
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	26.0	27.0	28.0	26.5

Moisture Variation From Optimum Moisture Content	2.5% dry	1.5% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R _{HD})	%	98.0	99.0	99.5	96.0	98.5	96.5
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 20581
 Report No 20581/R004
 Date Issued 18/01/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AM
Project	EYNESBURY - STAGE 8A	Date tested	26/11/20
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:01
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	14	15	16	17	18
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	1.73	1.75	1.73	1.72	1.66
Field moisture content	%	27.9	33.3	30.9	26.3	25.1

Test procedure AS 1289.5.7.1

Test No	13	14	15	16	17	18
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	1.76	1.78	1.76	1.74	1.69
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	30.0	34.5	32.5	27.5	27.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.0% dry	1.5% dry	1.0% dry	2.5% dry	1.5% dry
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Density Ratio (R _{HD})	%	98.0	98.5	98.5	98.5	98.5	97.0
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Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 20581
Report No 20581/R005
Date Issued 06/03/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 8A	Date tested	01/03/21
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 17:34
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	19	20	21	22	23	24
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	1.77	1.72	1.73	1.72	1.73
Field moisture content	%	22.9	22.6	23.6	21.3	22.6

Test procedure AS 1289.5.7.1

Test No	19	20	21	22	23	24
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	1.86	1.81	1.83	1.81	1.81
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	25.5	25.0	25.5	23.5	24.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.0% dry	1.5% dry	2.5% dry
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Density Ratio (R _{HD})	%	95.5	95.5	95.0	95.5	95.5	95.5
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Material description

No 19 - 24 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 20581
 Report No 20581/R006
 Date Issued 06/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 8A	Date tested	02/03/21
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 17:38
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	25	26	27	-	-	-
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	1.77	1.75	1.79	-	-
Field moisture content	%	12.4	15.7	13.6	-	-

Test procedure AS 1289.5.7.1

Test No	25	26	27	-	-	-
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	1.84	1.84	1.88	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.0	17.5	15.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	96.0	95.0	95.0	-	-
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Material description

No 25 - 27 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

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