



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

10th March 2021

Our Reference: 20582:NB898

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

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

Please find attached our Report No's 20582/R001 to 20582/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 was performed 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).

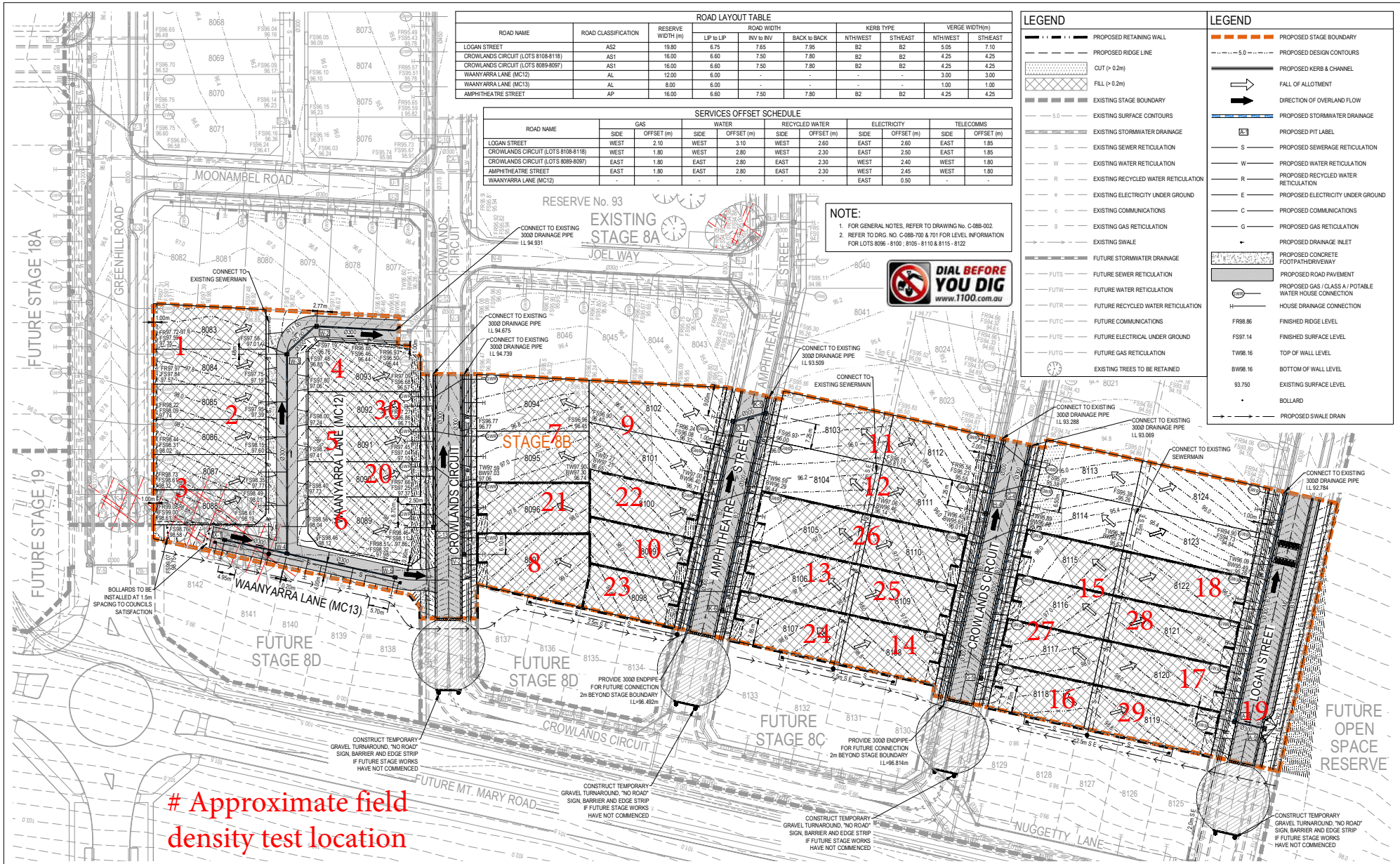
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1



ROAD LAYOUT TABLE									
ROAD NAME	ROAD CLASSIFICATION	RESERVE WIDTH (m)	ROAD WIDTH		KERB TYPE		VERGE WIDTH (m)		
			LP to LP	NV to NV	BACK to BACK	NTHWEST	STHEAST	NTHWEST	STHEAST
LOGAN STREET	AS2	18.00	6.75	7.75	7.80	B2	B2	4.25	4.25
CROWLANDS CIRCUIT (LOTS 8108-8118)	AS1	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
CROWLANDS CIRCUIT (LOTS 8089-8097)	AS1	16.00	6.60	7.50	7.80	B2	B2	4.25	4.25
WAANYARRA LANE (MC12)	AL	12.00	6.00	-	-	-	-	3.00	3.00
WAANYARRA LANE (MC13)	AL	8.00	6.00	-	-	-	-	1.00	1.00
AMPHYTHEATRE STREET	AP	16.00	6.00	7.50	7.80	B2	B2	4.25	4.25

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
CROWLANDS CIRCUIT (LOTS 8108-8118)	WEST	1.80	WEST	2.80	WEST	2.30	EAST	2.50	EAST	1.85
CROWLANDS CIRCUIT (LOTS 8089-8097)	EAST	1.80	EAST	2.80	EAST	2.30	WEST	2.40	WEST	1.80
AMPHYTHEATRE STREET	EAST	1.80	EAST	2.80	EAST	2.30	WEST	2.45	WEST	1.80
WAANYARRA LANE (MC12)							EAST	0.50		

NOTE:
 1. FOR GENERAL NOTES, REFER TO DRAWING NO. C-08B-002.
 2. REFER TO DRG. NO. C-08B-700 & 701 FOR LEVEL INFORMATION FOR LOTS 808 - 8100, 8105 - 8110 & 8115 - 8122.



LEGEND

- PROPOSED RETAINING WALL
- - - - PROPOSED RIDGE LINE
- [Pattern] CUT (> 0.2m)
- [Pattern] FILL (> 0.2m)
- EXISTING SURFACE BOUNDARY
- 5.0 --- EXISTING SURFACE CONTOURS
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER RETICULATION
- W --- EXISTING WATER RETICULATION
- R --- EXISTING RECYCLED WATER RETICULATION
- e --- EXISTING ELECTRICITY UNDER GROUND
- c --- EXISTING COMMUNICATIONS
- g --- EXISTING GAS RETICULATION
- EXISTING SWALE
- FUTURE STORMWATER DRAINAGE
- FUTS --- FUTURE SEWER RETICULATION
- FUTW --- FUTURE WATER RETICULATION
- FUTR --- FUTURE RECYCLED WATER RETICULATION
- FUTC --- FUTURE COMMUNICATIONS
- FUTE --- FUTURE ELECTRICAL UNDER GROUND
- FUTG --- FUTURE GAS RETICULATION
- EXISTING TREES TO BE RETAINED

LEGEND

- PROPOSED STAGE BOUNDARY
- 5.0 --- PROPOSED DESIGN CONTOURS
- PROPOSED KERB & CHANNEL
- FALL OF ALLOTMENT
- DIRECTION OF OVERLAND FLOW
- PROPOSED STORMWATER DRAINAGE
- PROPOSED PIT LEVEL
- PROPOSED SEWERAGE RETICULATION
- W --- PROPOSED WATER RETICULATION
- R --- PROPOSED RECYCLED WATER RETICULATION
- E --- PROPOSED ELECTRICITY UNDER GROUND
- C --- PROPOSED COMMUNICATIONS
- G --- PROPOSED GAS RETICULATION
- PROPOSED DRAINAGE INLET
- PROPOSED CONCRETE FOOTPATH/DRIVEWAY
- PROPOSED ROAD PAVEMENT
- PROPOSED GAS / CLASS A / POTABLE WATER HOUSE CONNECTION
- HOUSE DRAINAGE CONNECTION
- FR88.86 FINISHED RIDGE LEVEL
- FS97.14 FINISHED SURFACE LEVEL
- TW88.16 TOP OF WALL LEVEL
- BW88.16 BOTTOM OF WALL LEVEL
- 93.750 EXISTING SURFACE LEVEL
- BOLLARD
- PROPOSED SWALE DRAIN

Approximate field density test location

A	ISSUED FOR CONSTRUCTION	WB	ZS	SE	13.10.20
04	UPDATES TO ADDRESS COUNCIL COMMENTS	WB	ZS	SE	11.08.20
03	UPDATES TO ADDRESS COUNCIL COMMENTS	WB	ZS	SE	28.07.20
02	ISSUED FOR APPROVAL	WB	ZS	SE	03.07.20
01	ISSUED TO CLIENT FOR REVIEW	WB	ZS	SE	07.10.19
Issue	Description	By	Ckd	Pln	Date

Scale: 1 : 500

0 5 10 20 30 40 50m

Planner

Client

Filename: C-08B-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: [Blank]

Drawn: W.BUMAGAT

Designed: J.PROCK

Project Manager: S.EISEL

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Project: EYNEBURY TOWNSHIP STAGE 8B

Title: ROADWORKS AND DRAINAGE LAYOUT PLAN

ArCADIS 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-08B-220 - 10029435 - Issue A

Project No: 10029435

Last Saved: WBM51193 Date Plotted: 12 Oct 2020 - 06:44PM File Name: V1



COMPACTION ASSESSMENT

Job No 20582
 Report No 20582/R001
 Date Issued 10/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

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

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:00
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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
Field wet density	t/m ³	1.71	1.65	1.73	1.67	1.71
Field moisture content	%	16.0	17.2	14.7	17.8	18.3

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m ³	1.76	1.72	1.81	1.76	1.80
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.0	19.5	16.5	20.5	19.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	97.0	96.0	95.5	95.0	95.0	95.0
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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 20582
 Report No 20582/R002
 Date Issued 10/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

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

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:06
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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	1.72	1.71	1.62	1.79	1.79
Field moisture content	%	16.5	18.5	19.0	16.9	19.1

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	1.76	1.72	1.69	1.80	1.82
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.5	20.0	20.0	19.0	21.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	1.0% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	97.5	99.5	96.0	99.0	100.0	98.5
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 20582
 Report No 20582/R003
 Date Issued 10/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

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

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:12
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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	1.80	1.81	1.81	1.78	1.78
Field moisture content	%	17.0	14.6	18.2	18.3	16.6

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	1.85	1.82	1.91	1.80	1.84
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	17.0	20.5	20.5	19.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	97.5	99.5	95.0	99.0	97.0	97.0
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Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 20582
 Report No 20582/R004
 Date Issued 10/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 8B	Date tested	04/03/21
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:18
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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	1.73	1.66	1.70	1.66
Field moisture content	%	22.3	21.2	22.6	22.3	18.1

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	1.75	1.72	1.75	1.80	1.71
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	23.5	25.0	25.0	20.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	101.5	100.5	95.0	95.0	96.5	96.5
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Material description

No 19 - 24 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 20582
 Report No 20582/R005
 Date Issued 10/03/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	EYNESBURY - STAGE 8B	Date tested	05/03/21
Location	EYNESBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:24
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	25	26	27	28	29	30
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	1.72	1.71	1.71	1.71	1.66
Field moisture content	%	17.6	18.2	17.4	18.0	15.7

Test procedure AS 1289.5.7.1

Test No	25	26	27	28	29	30
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	1.81	1.75	1.77	1.80	1.72
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	20.5	19.5	20.5	17.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry	2.0% dry
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Density Ratio (R _{HD})	%	95.0	97.5	97.0	95.0	95.0	96.5
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Material description

No 25 - 30 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry