



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

12th September 2024

Our Reference: 23910:NB2027

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
HARLOW – STAGE 3 (TARNEIT)**

Please find attached our Report No's 23910/R001 to 23910/R004 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 2023 and was completed in December 2023.

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)

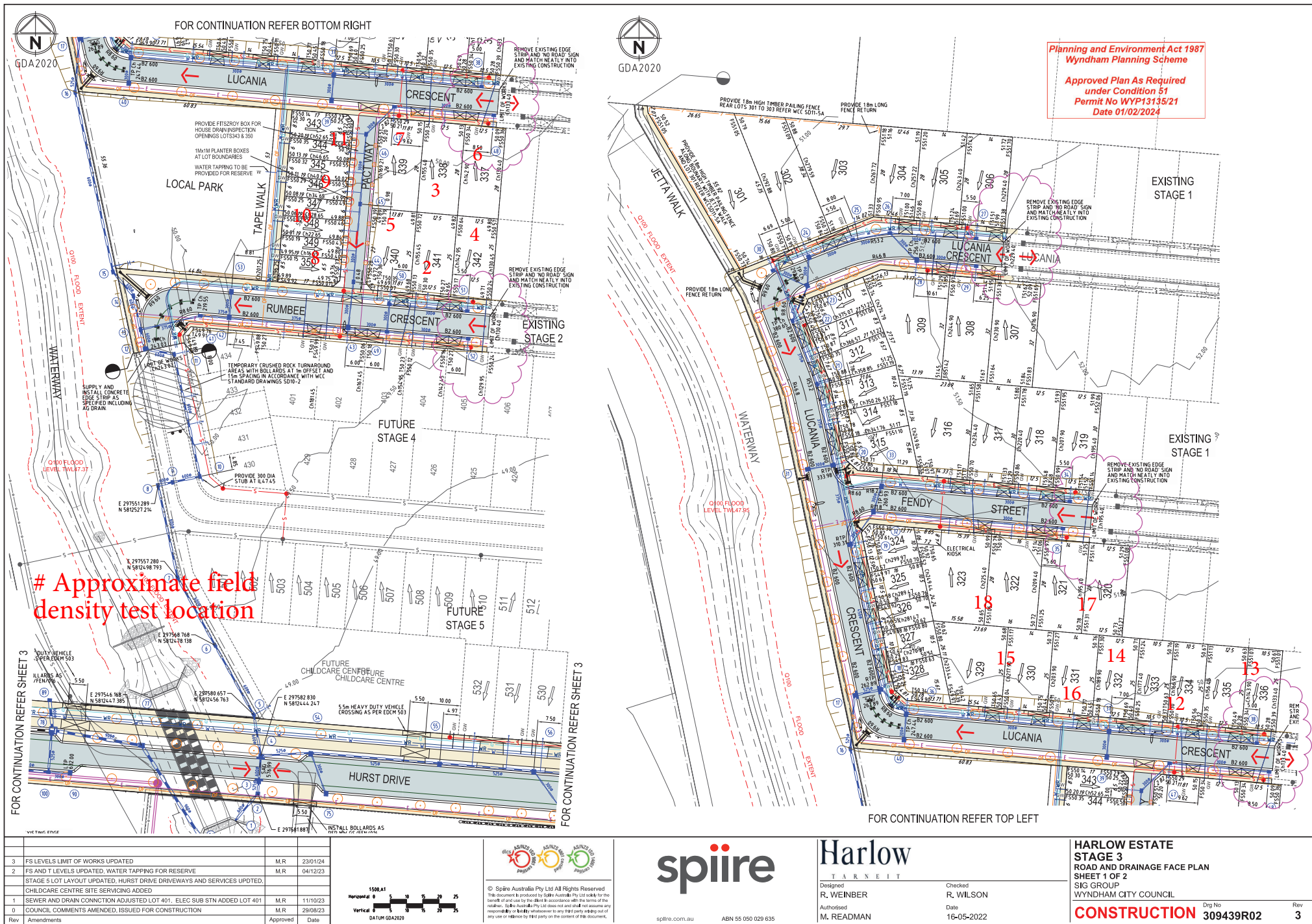
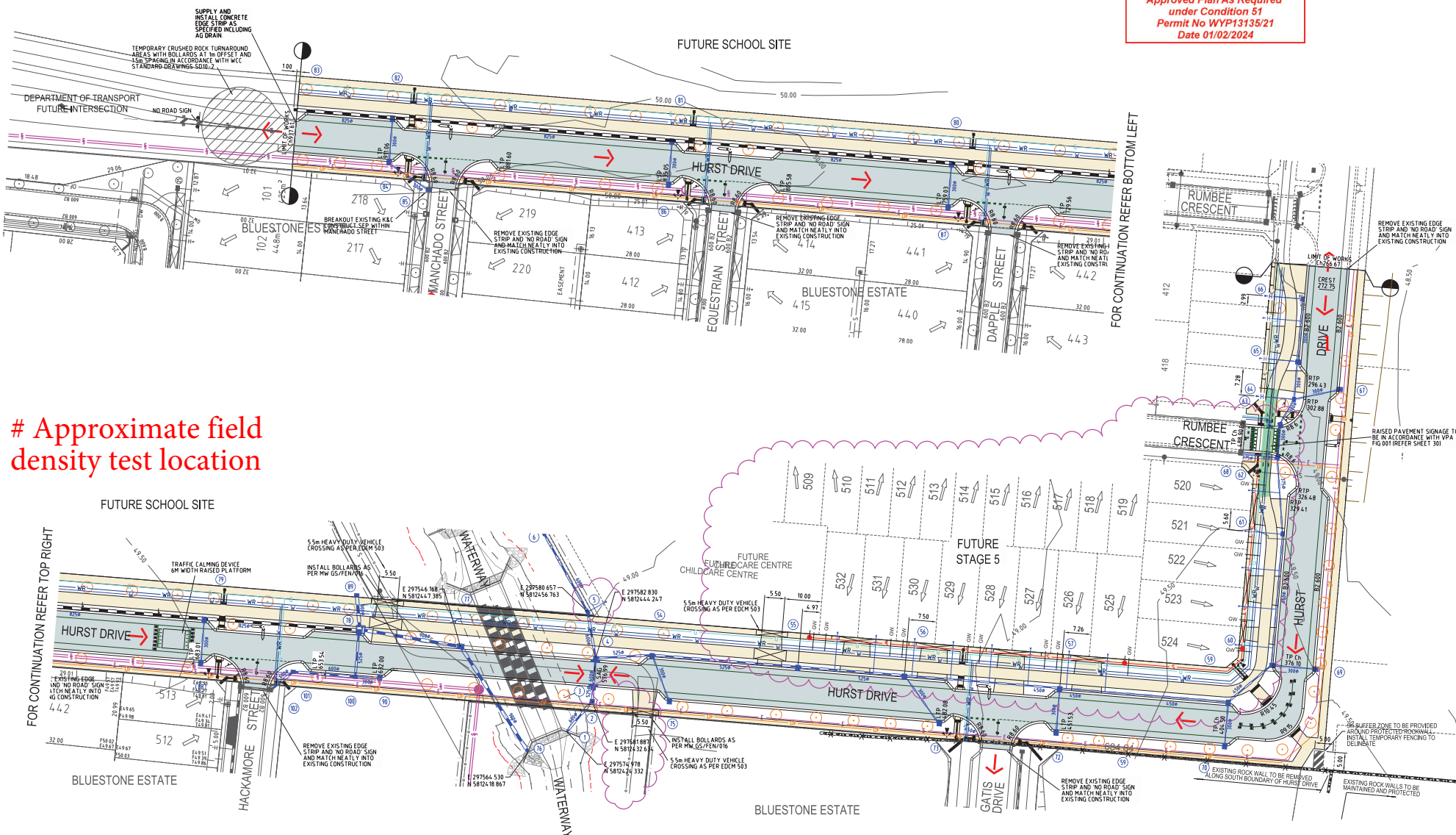


FIGURE 1 (2 of 2)



Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 51
Permit No WYP13135/21
Date 01/02/2024



Approximate field density test location

Rev	Amendments	Approved	Date
1	FS AND T LEVELS UPDATED. WATER TAPPING FOR RESERVE STAGE 5 LOT LAYOUT UPDATED. HURST DRIVE DRIVEWAYS AND SERVICES UPDATED. PIT 3 EXTERNAL 3 MONTH DIVERSION REMOVED FROM STAGE 5 WORKS CHILD CARE CENTRE SITE SERVICING ADDED	M.R	04/12/23
0	COUNCIL COMMENTS AMENDED. ISSUED FOR CONSTRUCTION	M.R	29/08/23



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Designed
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Authorised
M. READMAN
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Harlow
TARNETT
Checked
R. WILSON
Date
16-05-2022

**HARLOW ESTATE
STAGE 3
ROAD AND DRAINAGE FACE PLAN
SHEET 2 OF 2
SIG GROUP
WYNDHAM CITY COUNCIL**
CONSTRUCTION 309439R03

Dwg No 309439R03 Rev 1



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23910
Report No 23910/R001
Date Issued 04/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	HARLOW - STAGE 3	Date tested	28/11/23
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:54
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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	2.03	1.91	1.98	-	-	-
Field moisture content %	25.5	27.8	25.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	1	2	3	-	-	-
Compactive effort	Standard					
Override rock retained on sieve mm	19.0	19.0	19.0	-	-	-
Percent of override material wet	0	0	0	-	-	-
Peak Converted Wet Density t/m ³	2.03	2.00	2.06	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	25.0	30.5	28.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.0%	2.5% dry	2.0% dry	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	%	100.0	95.5	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 23910
Report No 23910/R002
Date Issued 13/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	HARLOW - STAGE 3	Date tested	01/12/23
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:24
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	4	5	6	7	8	9
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/m ³	1.87	1.81	1.93	1.87	1.89	1.84
Field moisture content %	29.0	28.6	32.0	29.9	27.6	28.1

Test procedure AS 1289.5.7.1

Test No	4	5	6	7	8	9
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	0	0
Peak Converted Wet Density t/m ³	1.93	1.90	1.99	1.93	1.92	1.92
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	28.5	30.0	34.5	32.5	30.0	30.5

Moisture Variation From Optimum Moisture Content	0.5% wet	1.0% dry	2.0% dry	2.0% dry	2.0% dry	2.0% dry
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	%	97.0	95.5	97.0	97.0	98.0	95.5
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Material description

No 4 - 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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23910
Report No 23910/R003
Date Issued 13/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	HARLOW - STAGE 3	Date tested	05/12/23
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	10	11	12	13	14	15
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/m ³	1.81	1.75	1.74	1.80	1.79	1.79
Field moisture content %	23.0	24.6	20.6	24.3	20.8	23.3

Test procedure AS 1289.5.7.1

Test No	10	11	12	13	14	15
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	0	0
Peak Converted Wet Density t/m ³	1.83	1.83	1.79	1.84	1.83	1.84
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	25.0	26.0	22.5	25.5	23.0	26.0

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	2.0% dry	1.0% dry	2.5% dry	2.5% dry
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	%	98.5	95.5	97.0	98.5	98.0	97.5
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Material description

No 10 - 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



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23910
Report No 23910/R004
Date Issued 16/01/24

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	HARLOW - STAGE 3	Date tested	15/12/23
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	16	17	18	-	-	-
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	1.96	1.95	1.99	-	-	-
Field moisture content %	23.7	23.4	21.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	16	17	18	-	-	-
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	1.96	1.99	2.03	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	23.0	26.0	21.5	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% wet	2.5% dry	0.0%	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	%	100.0	98.0	98.0	-	-	-
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Material description

No 16 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry