



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

16<sup>th</sup> May 2024

Our Reference: 23787:NB1857

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING**  
**SHERWOOD GRANGE – STAGE 7 (SUNBURY)**

Please find attached our Report No's 23787/R001 to 23787/R007 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 May 2024.

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).

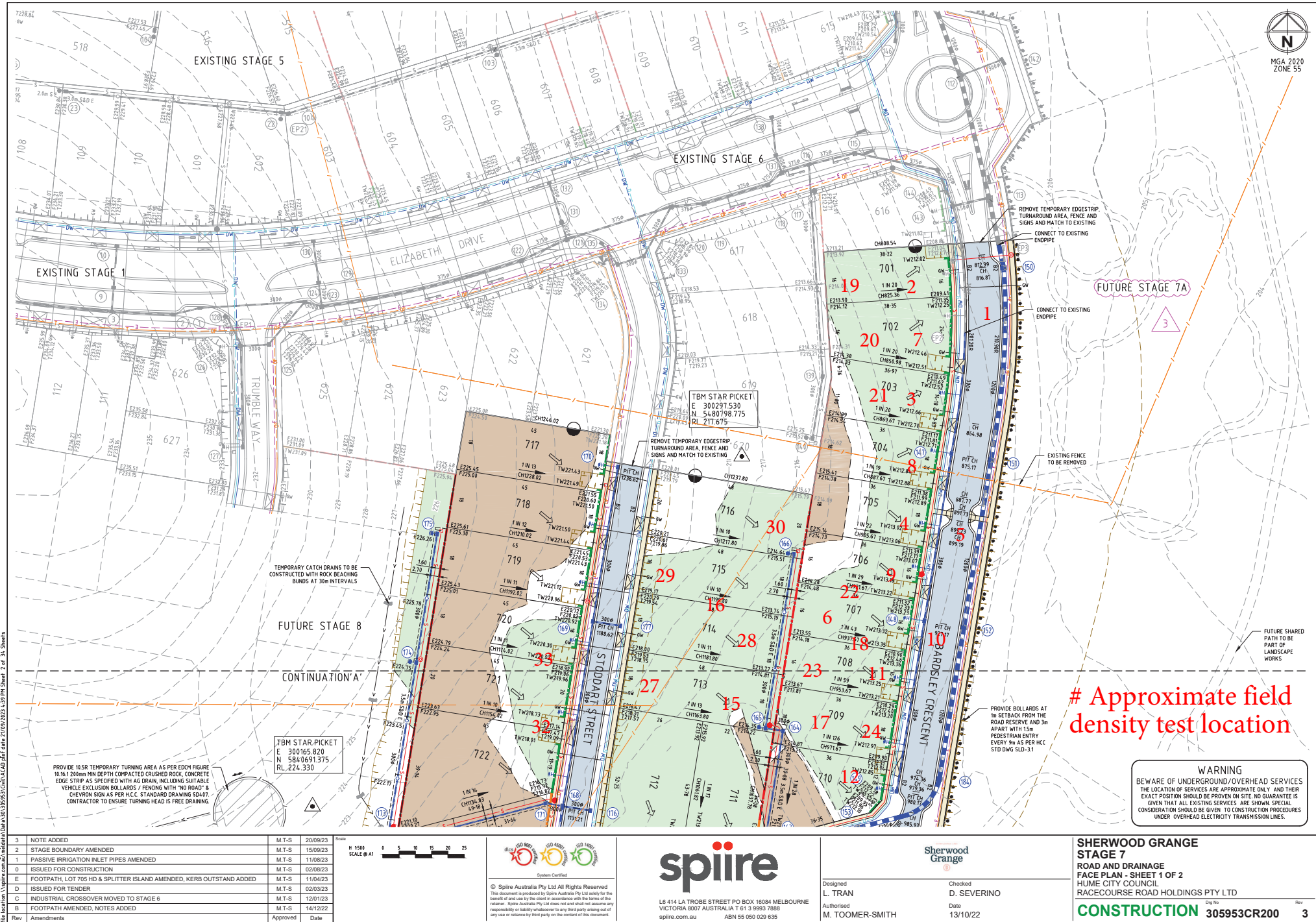
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

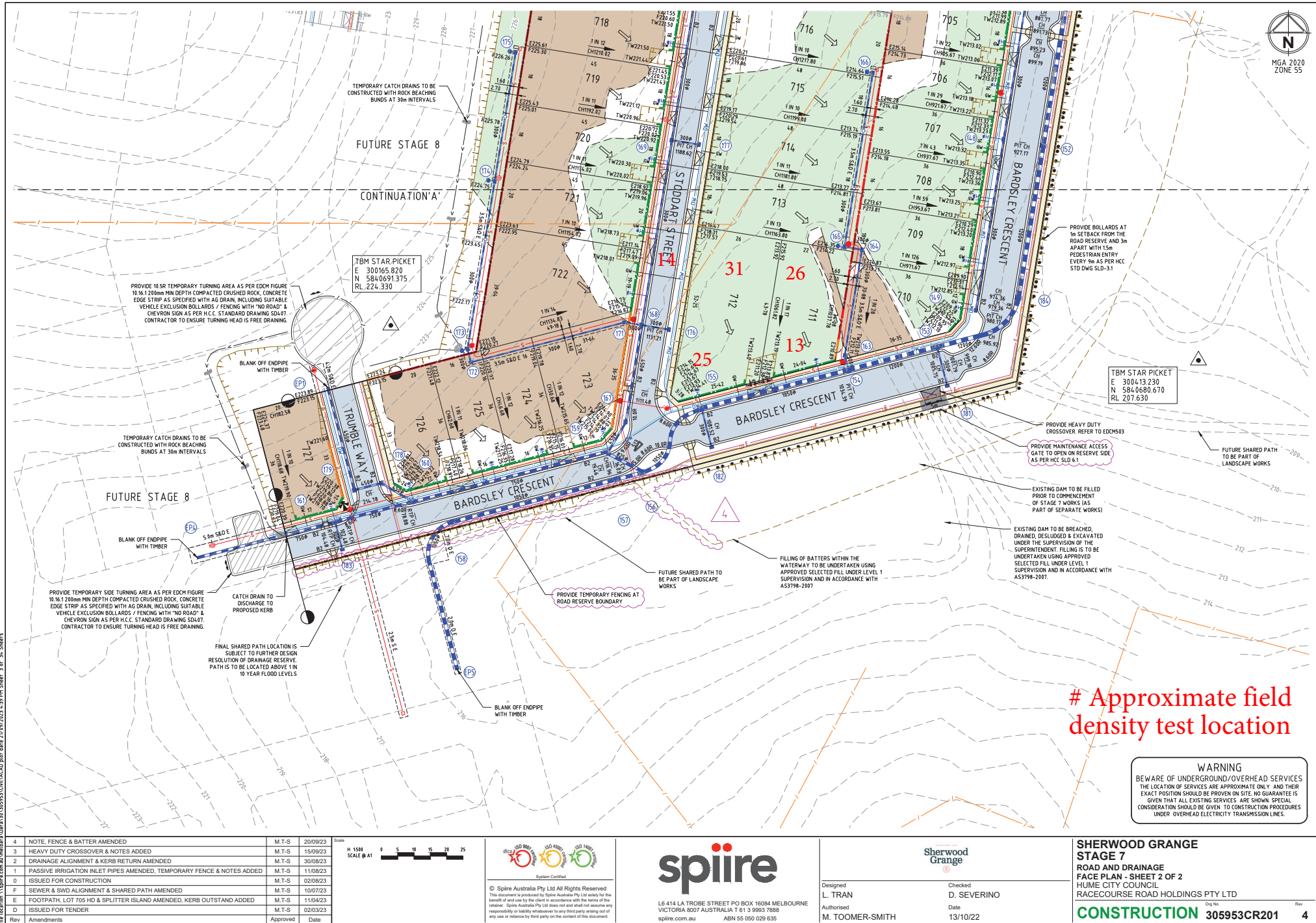
Civil Geotechnical Services

Nick Brock

# FIGURE 1 (1 of 2)

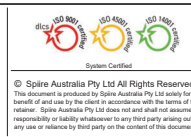
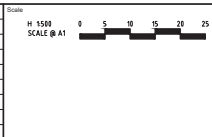


# FIGURE 1 (2 of 2)



File Name: 305953CR201.dwg, Project Name: 0501 - 04/14/2023, 4:39 PM, Sheet: 3 of 34, Sheets

Rev	Amendments	Approved	Date
4	NOTE, FENCE & BATTER AMENDED	M.T-S	20/09/23
3	HEAVY DUTY CROSSOVER & NOTES ADDED	M.T-S	15/09/23
2	DRAINAGE ALIGNMENT & KERB RETURN AMENDED	M.T-S	30/08/23
1	PASSIVE IRRIGATION INLET PIPES AMENDED, TEMPORARY FENCE & NOTES ADDED	M.T-S	11/08/23
0	ISSUED FOR CONSTRUCTION	M.T-S	02/08/23
F	SEWER & SWD ALIGNMENT & SHARED PATH AMENDED	M.T-S	10/07/23
E	FOOTPATH, LOT 705 HD & SPLITTER ISLAND AMENDED, KERB OUTSTAND ADDED	M.T-S	11/04/23
D	ISSUED FOR TENDER	M.T-S	02/03/23



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**Sherwood Grange**  
Designed  
**L. TRAN**  
Authorised  
**M. TOOMER-SMITH**  
Checked  
**D. SEVERINO**  
Date  
**13/10/22**

**SHERWOOD GRANGE**  
**STAGE 7**  
**ROAD AND DRAINAGE**  
**FACE PLAN - SHEET 2 OF 2**  
**HUME CITY COUNCIL**  
**RACECOURSE ROAD HOLDINGS PTY LTD**  
**CONSTRUCTION** 305953CR201 4



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23787  
Report No 23787/R001  
Date Issued 16/11/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	09/11/23
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:14
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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 <sup>3</sup>	2.15	2.18	2.17	-	-	-
Field moisture content %	14.2	13.3	14.7	-	-	-

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 <sup>3</sup>	2.16	2.19	2.22	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	16.0	15.0	17.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% 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 ( $R_{HD}$ )	%	99.5	99.5	97.5	-	-	-
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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 23787  
Report No 23787/R002  
Date Issued 04/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	24/11/23
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:09
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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 <sup>3</sup>	2.07	2.05	2.04	-	-	-
Field moisture content %	18.9	22.1	18.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	4	5	6	-	-	-
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 <sup>3</sup>	2.10	2.09	2.09	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.0	22.0	20.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	0.0%	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 ( $R_{HD}$ )	%	99.0	98.0	97.5	-	-	-
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Material description

No 4 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23787  
Report No 23787/R003  
Date Issued 04/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	28/11/23
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:10
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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 <sup>3</sup>	2.05	1.96	1.96	-	-	-
Field moisture content %	18.4	19.7	19.4	-	-	-

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 <sup>3</sup>	2.10	2.01	2.03	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	20.5	21.0	21.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	1.0% 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 ( $R_{HD}$ )	%	97.5	97.5	96.5	-	-	-
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Material description

No 7 - 9 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23787  
Report No 23787/R004  
Date Issued 08/12/23

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	06/12/23
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:57
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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 <sup>3</sup>	2.05	2.09	2.08	2.07	2.10	2.12
Field moisture content %	18.7	17.0	17.0	17.1	20.5	19.0

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 <sup>3</sup>	2.07	2.11	2.12	2.10	2.10	2.15
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	21.0	18.5	19.5	19.5	22.5	20.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.0% dry	2.5% dry	2.0% dry	2.0% dry	1.5% 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 ( $R_{HD}$ )	%	99.0	99.0	98.0	98.0	100.0	98.5
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Material description

No 10 - 15 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23787  
Report No 23787/R005  
Date Issued 13/05/24

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	15/01/24
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	16	17	18	19	20	21
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 <sup>3</sup>	1.91	1.91	1.82	1.82	1.86	1.85
Field moisture content %	26.6	24.9	21.3	18.8	19.3	22.2

Test procedure AS 1289.5.7.1

Test No	16	17	18	19	20	21
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 <sup>3</sup>	1.95	1.94	1.89	1.90	1.92	1.92
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	29.0	27.0	23.5	21.0	20.5	24.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.0% dry	1.5% 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 ( $R_{HD}$ )	%	98.0	98.5	96.5	95.5	97.0	96.5
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Material description

No 16 - 21 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 23787  
Report No 23787/R006  
Date Issued 13/05/24

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	18/01/24
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:01
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	22	23	24	25	26	27
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 <sup>3</sup>	1.93	1.90	1.93	2.04	2.13	2.07
Field moisture content %	17.8	19.2	18.4	18.7	17.3	18.6

Test procedure AS 1289.5.7.1

Test No	22	23	24	25	26	27
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 <sup>3</sup>	1.95	1.94	1.96	2.12	2.16	2.12
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	20.0	21.0	20.5	20.5	18.5	20.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	1.5% dry	1.5% dry	1.0% 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 ( $R_{HD}$ )	%	98.5	98.0	98.0	96.5	98.5	98.0
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Material description

No 22 - 27 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 23787  
Report No 23787/R007  
Date Issued 13/05/24

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	SHERWOOD GRANGE - STAGE 7	Date tested	08/05/24
Location	SUNBURY	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:09
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	28	29	30	31	32	33
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 <sup>3</sup>	1.96	1.92	1.90	1.94	1.99	1.92
Field moisture content %	20.3	21.0	19.9	18.7	22.0	19.5

Test procedure AS 1289.5.7.1

Test No	28	29	30	31	32	33
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 <sup>3</sup>	2.01	1.95	1.94	2.01	2.03	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	22.5	22.5	22.0	20.5	23.0	22.0

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	2.0% dry	2.0% dry	1.0% 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 ( $R_{HD}$ )	%	97.5	98.5	98.0	96.5	98.5	96.5
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Material description

No 28 - 33 Clay Fill

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909  
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Approved Signatory : Justin Fry