



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

11<sup>th</sup> September 2024

Our Reference: 24166:NB2017

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING  
THE PATCH – STAGE 8 (WOLLERT)**

Please find attached our Report No's 24166/R001 to 24166/R002 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 June 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).

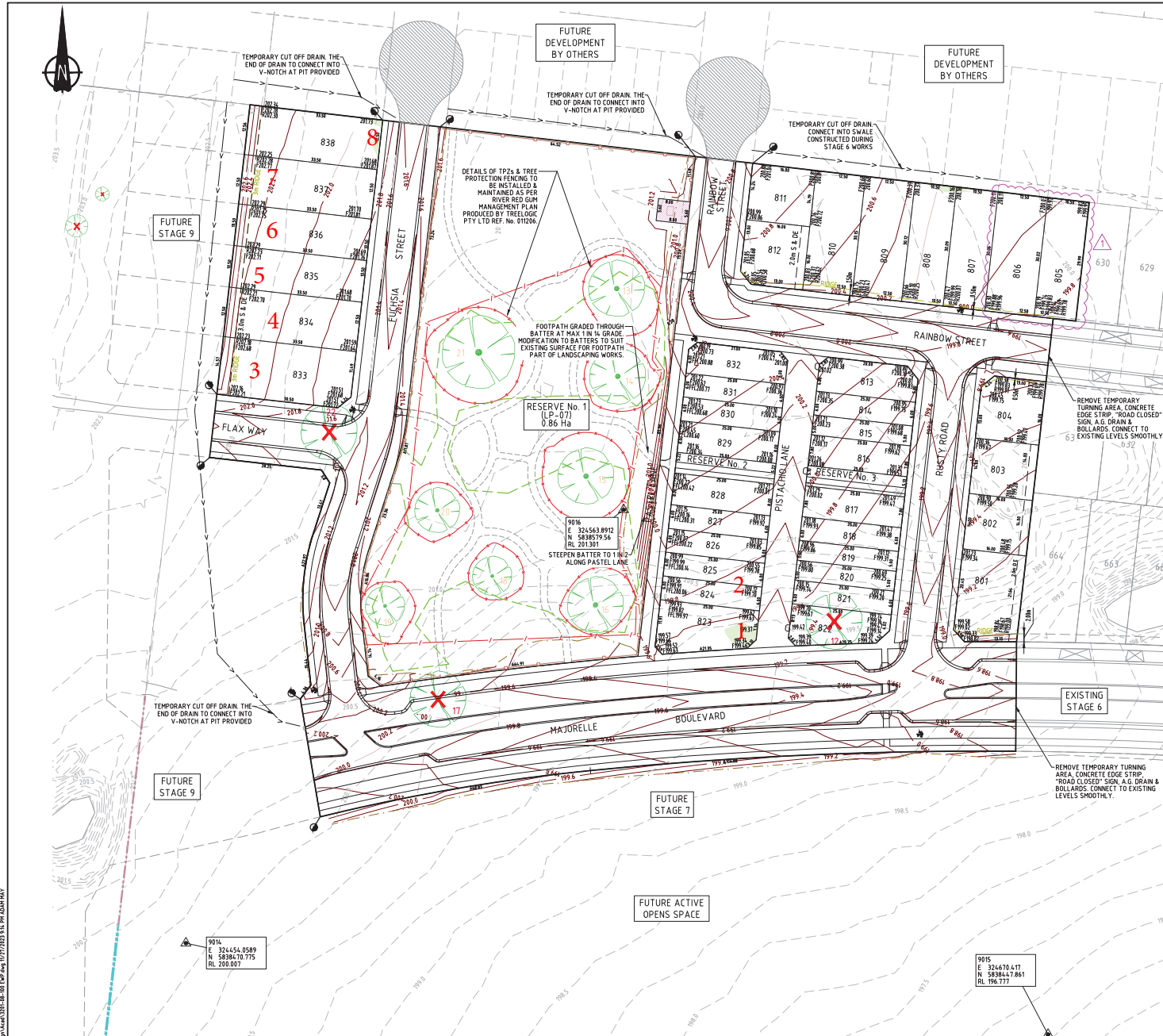
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

# FIGURE 1



| LEGEND                                    |          |          |
|-------------------------------------------|----------|----------|
| DESCRIPTION                               | EXISTING | PROPOSED |
| CENTRAL INVERT                            | ---      | ---      |
| SURFACE CONTOUR MINOR                     | ---      | ---      |
| SURFACE CONTOUR MAJOR                     | ---      | ---      |
| SURFACE LEVEL                             | 43.21    | F44.33   |
| RIDGE LEVEL                               |          | R43.55   |
| FINISHED FLOOR LEVEL                      |          | FFL44.48 |
| PERMANENT SURVEY MARK                     | +        | +        |
| TEMPORARY BENCH MARK                      | +        | +        |
| SETOUT POINT                              |          | +        |
| BATTER                                    |          |          |
| RIDGE / CHANGE OF GRADE LINE              | ---      | ---      |
| VEHICLE EXCLUSION BARRIER                 | ---      | ---      |
| TREE PROTECTION ZONE                      | ---      | ---      |
| TREE PROTECTION FENCING                   | ---      | ---      |
| DRY STONE WALL - TO BE RETAINED           | ---      | ---      |
| DRY STONE WALL - REMOVED IF FOR RETENTION | ---      | ---      |
| ELECTRICAL KIOSK                          |          |          |
| FILLING GREATER THAN 300mm                |          |          |
| TREE TO BE RETAINED                       |          |          |
| TREE TO BE REMOVED                        |          |          |
| VEGETATION LINE                           |          |          |
| VEGETATION LINE TO BE REMOVED             |          |          |

# Approximate field density test location



**WARNING**  
BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

| REV | DATE     | ORN | CHK | APP        | AMENDMENT               |
|-----|----------|-----|-----|------------|-------------------------|
| 1   | 27.11.23 | AM  |     |            | CONTOURS UPDATED        |
| 0   | 13.10.23 | AT  | KCL | B. J-MONCK | ISSUED FOR CONSTRUCTION |

ISSUED FOR CONSTRUCTION

H 1500  
SCALE @ A1

COPYRIGHT  
The concepts and information contained in this document are the Copyright of Cassill & Webley Consulting Engineers. Use of any part of the document in whole or part without the written permission of Cassill & Webley Consulting Engineers constitutes an infringement of copyright.  
This plan is not to be used for construction unless issued as revision 0 or higher.

**CW Cassill & Webley**  
CONSULTING ENGINEERS  
Street Address  
Level 20, 300 St Kilda Road W  
Melbourne VIC 3004 T: (03) 9548 1560  
E: Melbourne.Reception@cassillandwebley.com.au

CLIENT  
**JINDING**  
APPROVED PE 0055549  
*[Signature]*

DESIGNED  
A. MAY  
SCALE  
1:500

PROJECT  
THE PATCH - STAGE 8  
TITLE  
EARTHWORKS PLAN  
MUNICIPALITY  
CITY OF WHITTELESEA  
PP No.  
717154  
DRAWING No.  
3201-08-100  
REVISION  
1

ORIGINAL SIZE  
A1



## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 24166  
Report No 24166/R001  
Date Issued 17/06/24

|          |                                              |             |          |
|----------|----------------------------------------------|-------------|----------|
| Client   | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by   | AC       |
| Project  | THE PATCH - STAGE 8                          | Date tested | 05/06/24 |
| Location | WOLLERT                                      | Checked by  | JHF      |

|         |            |                 |        |             |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 09:25 |
|---------|------------|-----------------|--------|-------------|

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/m <sup>3</sup> | 1.87              | 1.88              | 1.91              | 1.84              | 1.90              | 1.89              |
| Field moisture content %           | 18.8              | 21.2              | 19.4              | 18.8              | 19.4              | 18.0              |

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    | 0    | 0    |
| Peak Converted Wet Density t/m <sup>3</sup>          | 1.90     | 1.91 | 1.98 | 1.93 | 1.97 | 1.93 |
| Adjusted Peak Converted Wet Density t/m <sup>3</sup> | -        | -    | -    | -    | -    | -    |
| Optimum Moisture Content %                           | 19.0     | 23.0 | 21.5 | 20.0 | 22.0 | 20.5 |

|                                                  |      |          |          |          |          |          |
|--------------------------------------------------|------|----------|----------|----------|----------|----------|
| Moisture Variation From Optimum Moisture Content | 0.0% | 2.0% dry | 2.0% dry | 1.0% dry | 2.5% dry | 2.5% dry |
|--------------------------------------------------|------|----------|----------|----------|----------|----------|

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 | 98.5 | 96.5 | 95.5 | 96.5 | 98.0 |
|----------------------------|---|------|------|------|------|------|------|

Material description

No 1 - 6 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 24166  
Report No 24166/R002  
Date Issued 17/06/24

|          |                                              |             |          |
|----------|----------------------------------------------|-------------|----------|
| Client   | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by   | AC       |
| Project  | THE PATCH - STAGE 8                          | Date tested | 05/06/24 |
| Location | WOLLERT                                      | Checked by  | JHF      |

|         |            |                 |        |             |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 10:29 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No                            | 7                 | 8                 | - | - | - | - |
|------------------------------------|-------------------|-------------------|---|---|---|---|
| Location                           | REFER TO FIGURE 1 | REFER TO FIGURE 1 |   |   |   |   |
| Approximate depth below FSL        |                   |                   |   |   |   |   |
| Measurement depth mm               | 175               | 175               | - | - | - | - |
| Field wet density t/m <sup>3</sup> | 1.90              | 1.93              | - | - | - | - |
| Field moisture content %           | 25.1              | 25.0              | - | - | - | - |

Test procedure AS 1289.5.7.1

| Test No                                              | 7        | 8    | - | - | - | - |
|------------------------------------------------------|----------|------|---|---|---|---|
| Compactive effort                                    | Standard |      |   |   |   |   |
| Override rock retained on sieve mm                   | 19.0     | 19.0 | - | - | - | - |
| Percent of override material wet                     | 0        | 0    | - | - | - | - |
| Peak Converted Wet Density t/m <sup>3</sup>          | 1.98     | 1.98 | - | - | - | - |
| Adjusted Peak Converted Wet Density t/m <sup>3</sup> | -        | -    | - | - | - | - |
| Optimum Moisture Content %                           | 26.0     | 27.0 | - | - | - | - |

|                                                  |          |          |   |   |   |   |
|--------------------------------------------------|----------|----------|---|---|---|---|
| Moisture Variation From Optimum Moisture Content | 1.0% dry | 2.0% dry | - | - | - | - |
|--------------------------------------------------|----------|----------|---|---|---|---|

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 ( $R_{HD}$ ) | % | 96.0 | 97.0 | - | - | - | - |
|----------------------------|---|------|------|---|---|---|---|

Material description

No 7 - 8 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