

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

9<sup>th</sup> November 2020

Our Reference: 20185:NB839

Winslow Constructors Pty Ltd 50 Barry Road CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

#### RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING 85-109 FARM ROAD – STAGE 2A (WERRIBEE)

Please find attached our Report No's 20185/R001 and 20185/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 commenced in March and was completed in April 2020.

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).

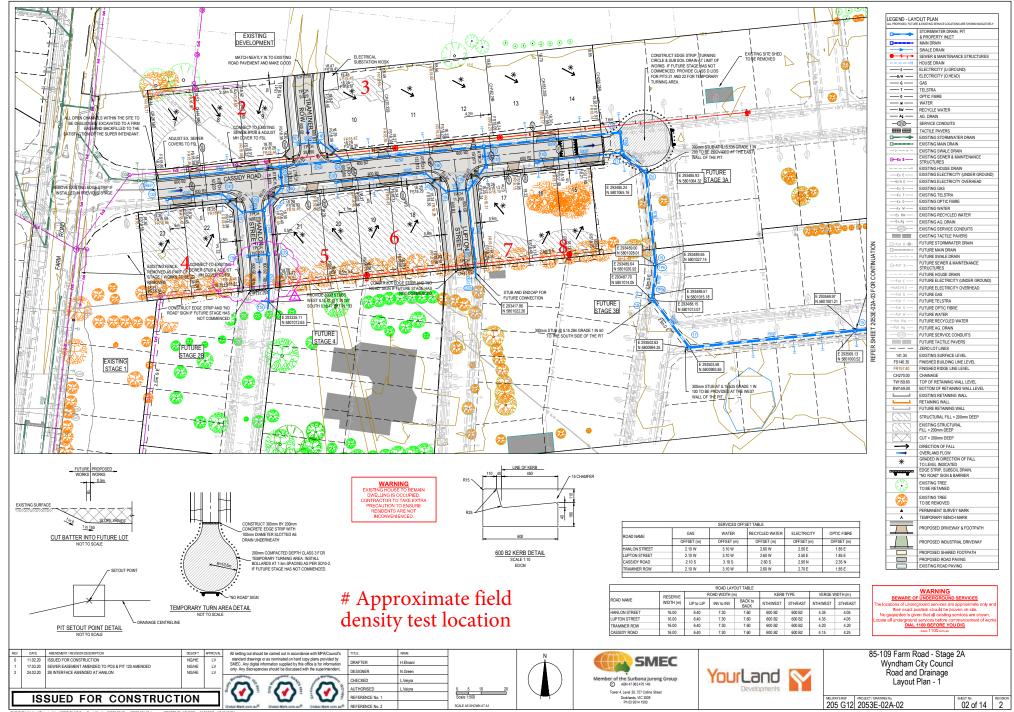
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

# FIGURE 1



DWG PATH: V:\_VaultProjects\_Urbani2053E-85-109 Farm Road, Wentbeel2053E-02A/Dwgs/2053E-02A-02.dwg PRINTED BY: NG 12325 on 2403/2020 at 03:05:55 ft



### **COMPACTION ASSESSMENT**

| <i>IVIL GEOTECHNICAL SERVICES</i><br>- 8 Rose Avenue, Croydon 3136<br>Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) |  |                                       |                         |                         |                         |  |                        | 20185<br>20185/R00<br>27/04/2020 |
|---|--|---------------------------------------|-------------------------|-------------------------|-------------------------|--|------------------------|----------------------------------|
| Client<br>Project<br>Location   | WINSLOW CONSTRUC<br>85-109 FARM ROAD - S<br>WERRIBEE | , , , , , , , , , , , , , , , , , , , |                         |                         |                         | Tested by<br>Date tested<br>Checked by | BGG<br>31/03/20<br>JHF |                                  |
| Feature   | EARTHWORKS   |                                       | Layer thickness         |                         | 200 mm                  |  | Time                   | e: 14:11                         |
| Test procedu  | ıre AS 1289.2.1.1 & 5.8                              | 3. 1                                  |                         |                         |                         |  |                        |                                  |
| Test No   |  |                                       | 1                       | 2                       | 3                       | 4                                      | -                      | -                                |
| Location  |  |                                       | REFER<br>TO<br>FIGURE 1 | REFER<br>TO<br>FIGURE 1 | REFER<br>TO<br>FIGURE 1 | REFER<br>TO<br>FIGURE                  | 1                      |                                  |
|   | depth below FSL                                      |                                       |                         |                         |                         |  |                        |                                  |
| Measurement depth mm  |  |                                       | 175                     | 175                     | 175                     | 175                                    | -                      | -                                |
| Field wet densityt/m³Field moisture content%  |  | 2.02<br>12.2                          | 2.02<br>11.9            | 2.02<br>11.9            | 2.00<br>13.4            | -                                      | -                      |                                  |
| Test No<br>Compactive e   | Ire AS 1289.5.7.1                                    |                                       | 1                       | 2                       | 3<br>Stan               | 4<br>dard                              | -                      | -                                |
|   | retained on sieve                                    | mm                                    | 19.0                    | 19.0                    | 19.0                    | 19.0                                   | -                      | -                                |
| Percent of ove  | ersize material                                      | wet                                   | 0                       | 0                       | 0                       | 0                                      | -                      | -                                |
| Peak Convert  | ed Wet Density                                       | t∕m³                                  | 2.05                    | 2.05                    | 2.05                    | 2.06                                   | -                      | -                                |
| Adjusted Peal   | k Converted Wet Density                              | t∕m³                                  | -                       | -                       | -                       | -                                      | -                      | -                                |
|   | sture Content  | %                                     | 14.5                    | 14.0                    | 14.0                    | 15.0                                   | -                      | -                                |
| Optimum Moi:  |  |                                       |                         | 2.00/                   | 2.0%                    | 1.5%                                   | -                      |                                  |
| Optimum Mois<br>Moist   | ure Variation From                                   |                                       | 2.0%                    | 2.0%                    | 2.070                   | 1.070                                  |                        | -                                |
| Moist   | ure Variation From<br>ım Moisture Content            |                                       | 2.0%<br>dry             | 2.0%<br>dry             | dry                     | dry                                    |                        |                                  |

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### **COMPACTION ASSESSMENT**

| CIVIL GEOTECHNICAL SERVICES<br>- 8 Rose Avenue, Croydon 3136<br>Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) |  |                     |                         |                         |                                |  |                        | 20185<br>20185/R002<br>27/04/2020 |
|---|--|---------------------|-------------------------|-------------------------|--------------------------------|--|------------------------|-----------------------------------|
| Client<br>Project<br>Location   | WINSLOW CONSTRUC<br>85-109 FARM ROAD - S<br>WERRIBEE   |                     |                         |                         |                                | Tested by<br>Date tested<br>Checked by | BGG<br>01/04/20<br>JHF |                                   |
| Feature   | EARTHWORKS   |                     | Layer thickness         |                         | 200 mm                         |  | Time: 14:33            |                                   |
| Test proced   | ure AS 1289.2.1.1 & 5.8.   | 1                   |                         |                         |                                |  |                        |                                   |
| Test No   |  |                     | 5                       | 6                       | 7                              | 8                                      | -                      | -                                 |
| Location  |  |                     | REFER<br>TO<br>FIGURE 1 | REFER<br>TO<br>FIGURE 1 | REFER<br>TO<br>FIGURE 1        | REFER<br>TO<br>FIGURE                  |                        |                                   |
|   | depth below FSL  |                     |                         |                         |                                |  |                        |                                   |
| Measurement   |  | mm                  | 175                     | 175                     | 175                            | 175                                    | -                      | -                                 |
| Field wet densityt/m³Field moisture content%  |  | 2.02<br>11.8        | 1.92<br>12.3            | 1.92<br>12.4            | 1.95<br>13.2                   | -                                      | -                      |                                   |
| lest procedi  | ure AS 1289.5.7.1  |                     | 5                       | 6                       | 7                              | 8<br>Idard                             | -                      | -                                 |
| Test No   | offort   |                     |                         |                         | Stan                           |  |                        |                                   |
| Test No<br>Compactive e   |  | mm                  | 19.0                    | 19.0                    |                                |  | -                      | -                                 |
| Test No<br>Compactive e<br>Oversize rock  | retained on sieve  | mm<br>wet           | 19.0<br>0               | 19.0<br>0               | 19.0                           | 19.0                                   | -                      | -                                 |
| Test No<br>Compactive e<br>Oversize rock<br>Percent of ove  | c retained on sieve<br>ersize material   | wet                 | 0                       | 0                       | 19.0<br>0                      | 19.0<br>0                              |                        | -                                 |
| Test No<br>Compactive e<br>Oversize rock<br>Percent of ove<br>Peak Convert  | retained on sieve  |                     |                         |                         | 19.0                           | 19.0                                   | -                      | -                                 |
| Test No<br>Compactive e<br>Oversize rock<br>Percent of ove<br>Peak Convert<br>Adjusted Pea                          | c retained on sieve<br>ersize material<br>ted Wet Density  | wet<br>t/m³         | 0                       | 0                       | 19.0<br>0                      | 19.0<br>0                              | -                      | -                                 |
| Test No<br>Compactive e<br>Oversize rock<br>Percent of ove<br>Peak Convert<br>Adjusted Pea<br>Optimum Moi           | c retained on sieve<br>ersize material<br>ted Wet Density<br>k Converted Wet Density                   | wet<br>t/m³<br>t/m³ | 0<br>2.05<br>-          | 0<br>1.95<br>-          | 19.0<br>0<br>1.95<br>-<br>14.5 | 19.0<br>0<br>2.00<br>-                 | -                      | -                                 |
| Test No<br>Compactive e<br>Oversize rock<br>Percent of ove<br>Peak Convert<br>Adjusted Pea<br>Optimum Moi<br>Moist  | c retained on sieve<br>ersize material<br>ted Wet Density<br>k Converted Wet Density<br>isture Content | wet<br>t/m³<br>t/m³ | 0<br>2.05<br>-<br>14.0  | 0<br>1.95<br>-<br>14.5  | 19.0<br>0<br>1.95<br>-         | 19.0<br>0<br>2.00<br>-<br>15.0         | -                      | -                                 |

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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

Approved Signatory : Justin Fry