

## CIVIL GEOTECHNICAL SERVICES ABN 26 474 013 724

## PO Box 678 Croydon Vic 3136 Telephone: 9723 0744 Facsimile: 9723 0799

10<sup>th</sup> June 2022

Our Reference: 22127:NB1275

Winslow Constructors Pty Ltd 50 Barry Road CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING DELARAY – STAGE 19B (CLYDE NORTH)

Please find attached our Report No 22127/R001 which relates 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 2022.

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





## **COMPACTION ASSESSMENT**

Job No 22127 CIVIL GEOTECHNICAL SERVICES Report No 22127/R001 Date Issued 6 - 8 Rose Avenue, Croydon 3136 20/04/2022

WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Client Tested by SB **DELARAY - STAGE 19B** Date tested 28/03/22 Project Location CLYDE NORTH Checked by JHF

Feature **DAM BACKFILL** Layer thickness 200 mm Time: 12:00

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No                     |      | 1        | 2        | 3        | 4        | 5        | 6        |
|-----------------------------|------|----------|----------|----------|----------|----------|----------|
| Location                    |      |          |          |          |          |          |          |
|                             |      | REFER    | REFER    | REFER    | REFER    | REFER    | REFER    |
|                             |      | TO       | TO       | TO       | TO       | TO       | TO       |
|                             |      | FIGURE 1 |
|                             |      |          |          |          |          |          |          |
|                             |      |          |          |          |          |          |          |
|                             |      |          |          |          |          |          |          |
| Approximate depth below FSL | т    | 0.8      | 0.6      | 0.4      | 0.2      | fsl      | fsl      |
| Measurement depth           | mm   | 175      | 175      | 175      | 175      | 175      | 175      |
| Field wet density           | t/m³ | 1.93     | 1.94     | 1.94     | 1.95     | 1.97     | 1.93     |
| Field moisture content      | %    | 23.3     | 24.3     | 23.1     | 24.1     | 21.9     | 22.7     |

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/m³ | 1.97     | 1.97 | 1.98 | 1.98 | 1.99 | 1.97 |
| Adjusted Peak Converted Wet Density | t/m³ | -        | -    | -    | -    | -    | -    |
| Optimum Moisture Content            | %    | 24.0     | 24.5 | 24.0 | 24.5 | 22.5 | 23.5 |

| Moisture Variation From   | 0.5% | 0.5% | 1.0% | 0.5% | 0.5% | 1.0% |
|---------------------------|------|------|------|------|------|------|
| Ontingum Maiatura Cantant | dn   | dn.  | dn.  | dn.  | dn.  | dn.  |
| Optimum Moisture Content  | dry  | dry  | dry  | dry  | dry  | ary  |

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 <sub>HD</sub> ) | % | 98.0 | 98.5 | 98.0 | 98.5 | 99.5 | 98.0 |
|----------------------------------|---|------|------|------|------|------|------|

Material description

No 1 - 6 Clay Fill

NATA Accredited Laboratory No 9909 Accredited for compliance with ISO/IEC 17025 - Testing

AVRLOT HILF V1.10 MAR 13

Approved Signatory: Justin Fry