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

29th July 2020

Our Reference: 19604:NB777

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ALBRIGHT – STAGE 8B (TRUGANINA)

Please find attached our Report No's 19604/R001 to 19604/R004 which relate to the field density testing that was conducted within the filled allotments of the above subdivision. The level 1 inspections and associated field density testing was performed in September 2019.

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).

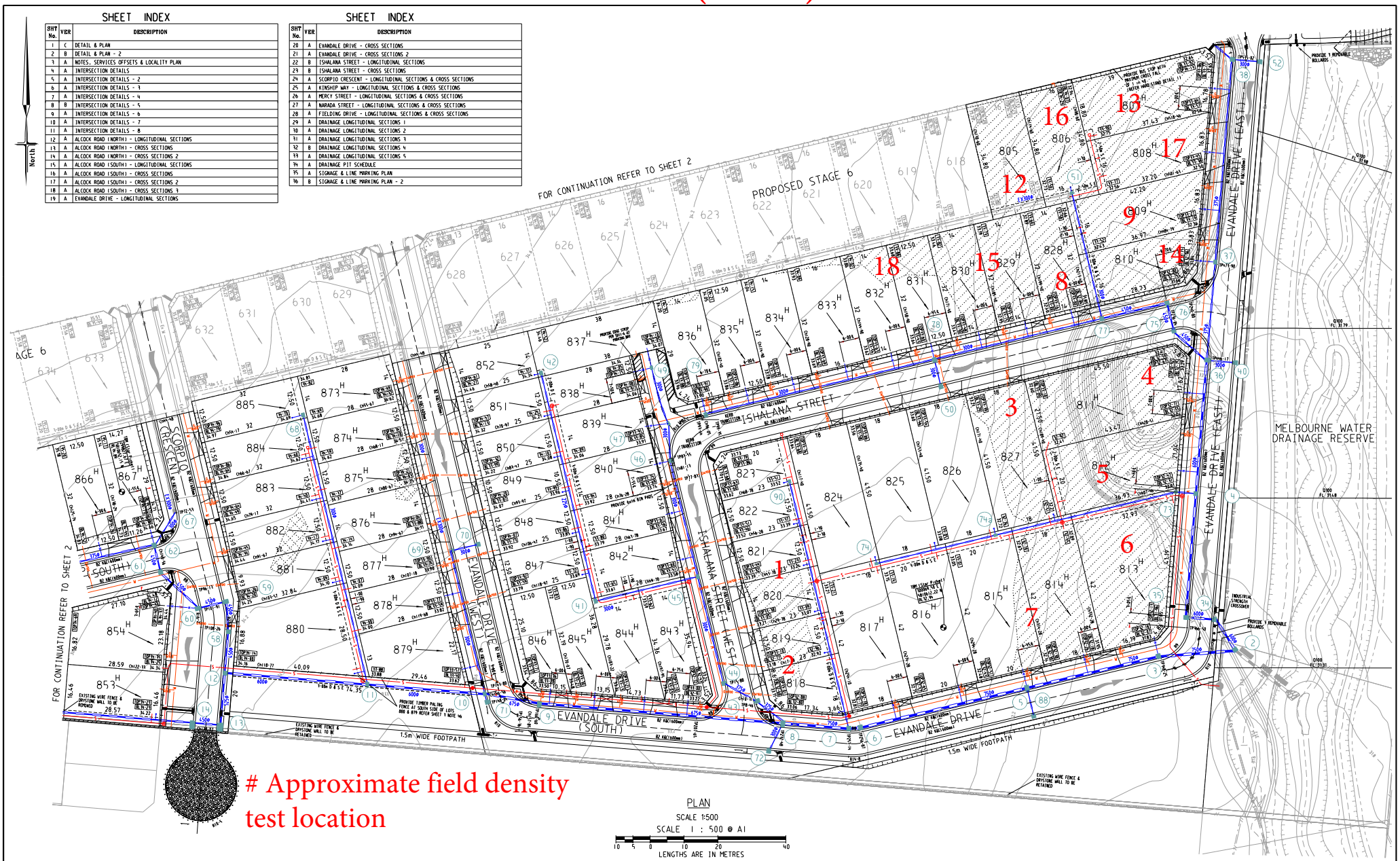
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

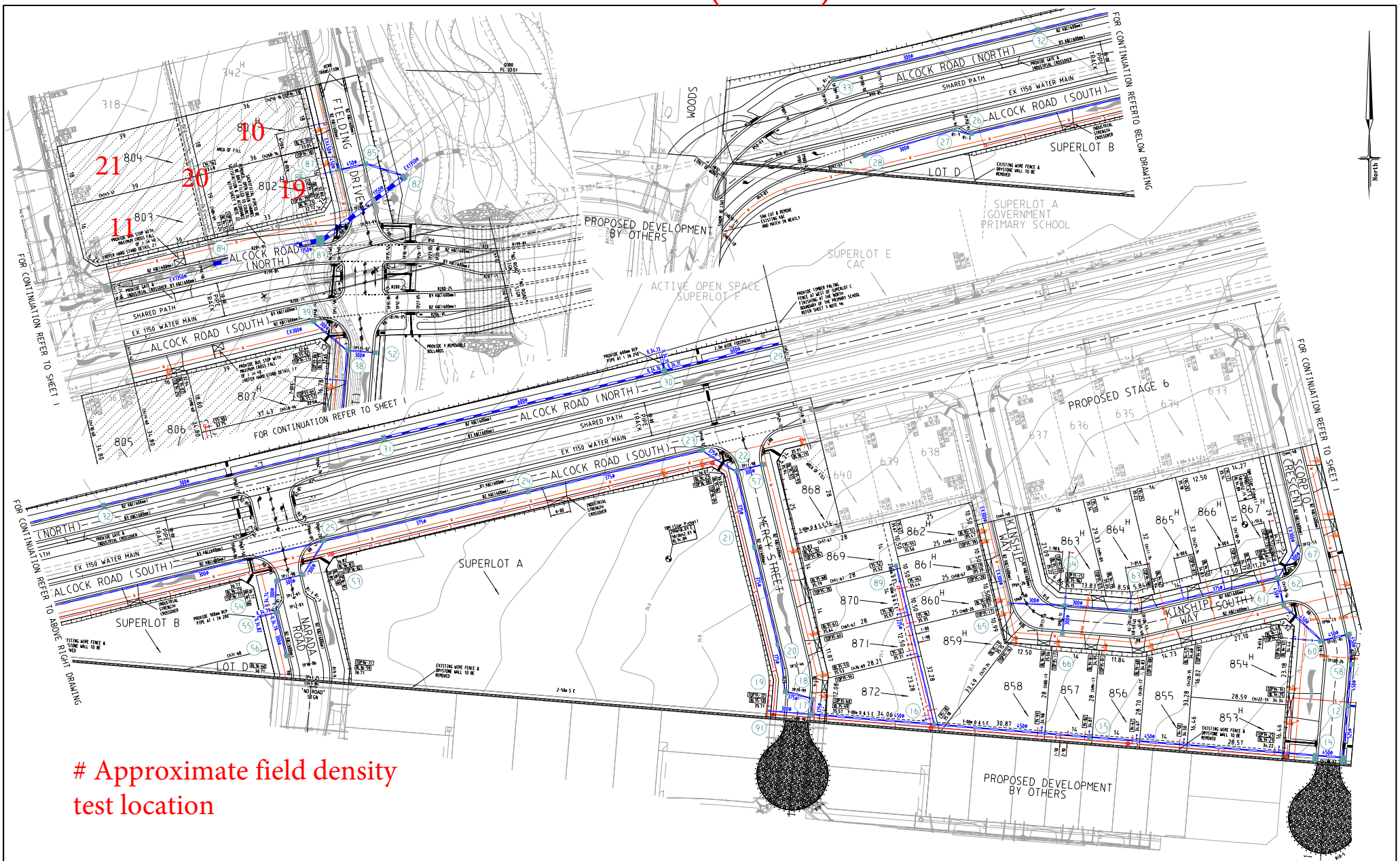
Civil Geotechnical Services

Nick Brock

# FIGURE 1 (1 of 2)



# FIGURE 1 (2 of 2)




# Approximate field density test location

ATTENTION TO CONTRACTOR

1. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.
2. Contractor to ensure that the site is pegged and or set out checked by the licenced surveyor responsible for certifying the Plan of Subdivision prior to underground infrastructure being installed.
3. Where concrete works abut a sewer access chamber surround or similar structure, an expansion joint of approved material shall be provided between the two faces.

PLAN
SCALE 1:500
SCALE 1 : 500 @ A1
10 5 0 10 20 40
LENGTHS ARE IN METRES

SYMBOL LEGEND

| | | | |
|---|---|---|---|
| Drains | Prop / Exist | Ex/Natural/FS Level | |
| Sewer <300 | | FS @ Building Line | |
| Sewer >300 | | Top/Toe of Batter | |
| Water | | Top Ret. Wall Level | |
| House Drain | | 100yr Flood Level | |
| Property Inlet | | Fill Prop/Ex (> 0.15m depth) | |
| Street Sign | | Cut Prop/Ex (> 0.15m depth) | |
| PSM | | KERB TRANSITION | |
| Retaining Wall | | | |
| Conduits 50mm | | | |
| Conduits 100mm | | | |
| Ex Gas/Elect/Tel | | | |
| TBM | | | |

| VER | DATE | REMARKS |
|---|---|---|
| B | 23/07/19 | CROSSOVER AT LOT 858 AMENDED TO EAST |
| A | 17/06/19 | ISSUE FOR CONSTRUCTION |


breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310


| | |
|---|---|
| MELWAY REF. | 360-E-11 |
| SURVEY | BPD |
| DESIGN | D.P |
| DRAWN | D.P |
| CHECKED | |
| SCALE | AS SHOWN |
| DATUM | AHD |
| DATE | SEP 18 |

ALBRIGHT ESTATE
STAGE 8B

MUNICIPALITY: WYNDHAM
REFERENCE: 9354 E/8B
SHEET 2 OF 36 B

# COMPACTION ASSESSMENT


***CIVIL GEOTECHNICAL SERVICES***

*6 - 8 Rose Avenue, Croydon 3136*


| | | | |
|---|---|---|---|
| | | *Job No* | 19604 |
| | | *Report No* | 19604/R001 |
| | | *Date Issued* | 25/11/2019 |
| *Client* | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | *Tested by* | SB |
| *Project* | ALBRIGHT - ESTATE STAGE 8B | *Date tested* | 12/09/19 |
| *Location* | TRUGANINA | *Checked by* | JHF |

***Feature*** **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:30

*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/m³* | 2.00 | 1.96 | 1.96 | 1.95 | 1.98 | 1.97 |
| *Field moisture content* | *%* | 23.4 | 26.6 | 25.0 | 25.2 | 26.4 | 23.1 |

*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* | 2.05 | 2.00 | 1.99 | 2.01 | 2.04 | 2.02 |
| *Adjusted Peak Converted Wet Density* | *t/m³* | - | - | - | - | - | - |
| *Optimum Moisture Content* | *%* | 21.0 | 24.5 | 22.5 | 23.0 | 25.0 | 22.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Moisture Variation From Optimum Moisture Content* | | 2.5% wet | 2.0% wet | 2.5% wet | 2.0% wet | 1.5% wet | 1.0% wet |
| ***Density Ratio ( $R_{HD}$ )*** | *%* | **97.5** | **98.0** | **98.0** | **97.0** | **97.0** | **97.5** |

*Material description*

No 1 - 6 Clay Fill

*AVRLOT HILF V1.10 MAR 13*

NATA

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

Accreditation No 9909

Approved Signatory : Justin Fry

# COMPACTION ASSESSMENT


***CIVIL GEOTECHNICAL SERVICES***

*6 - 8 Rose Avenue, Croydon 3136*


| | | | |
|---|---|---|---|
| | | *Job No* | 19604 |
| | | *Report No* | 19604/R002 |
| | | *Date Issued* | 20/09/2019 |
| *Client* | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | *Tested by* | WS |
| *Project* | ALBRIGHT - ESTATE STAGE 8B | *Date tested* | 17/09/19 |
| *Location* | TRUGANINA | *Checked by* | JHF |

***Feature*** **EARTHWORKS** *Layer thickness* 200 mm *Time:* 07:30

*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/m³* | 1.87 | 1.85 | 1.91 | - | - | - |
| *Field moisture content* | *%* | 22.8 | 19.6 | 23.2 | - | - | - |

*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/m³* | 1.96 | 1.94 | 1.96 | - | - | - |
| *Adjusted Peak Converted Wet Density* | *t/m³* | - | - | - | - | - | - |
| *Optimum Moisture Content* | *%* | 21.0 | 18.0 | 20.0 | - | - | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Moisture Variation From Optimum Moisture Content* | | 2.0% wet | 2.0% wet | 2.0% wet | - | - | - |

| ***Density Ratio ( $R_{HD}$ )*** | *%* | **95.5** | **95.5** | **97.5** | **-** | **-** | **-** |
|---|---|---|---|---|---|---|---|

*Material description*

No 7 - 9 Clay Fill

*AVRLOT HILF V1.10 MAR 13*

NATA

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Accreditation No 9909

Approved Signatory : Justin Fry

# COMPACTION ASSESSMENT


***CIVIL GEOTECHNICAL SERVICES***

*6 - 8 Rose Avenue, Croydon 3136*


| | | | |
|---|---|---|---|
| | | *Job No* | 19604 |
| | | *Report No* | 19604/R003 |
| | | *Date Issued* | 26/09/2019 |
| *Client* | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | *Tested by* | JB |
| *Project* | ALBRIGHT - ESTATE STAGE 8B | *Date tested* | 18/09/19 |
| *Location* | TRUGANINA | *Checked by* | JHF |

***Feature*** **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:03

*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/m³* | 1.87 | 1.91 | 1.92 | 1.91 | 1.88 | 1.85 |
| *Field moisture content* | *%* | 21.0 | 21.6 | 22.2 | 21.1 | 20.9 | 18.3 |

*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/m³* | 1.91 | 1.94 | 1.96 | 1.95 | 1.92 | 1.89 |
| *Adjusted Peak Converted Wet Density* | *t/m³* | - | - | - | - | - | - |
| *Optimum Moisture Content* | *%* | 23.5 | 23.5 | 24.0 | 23.5 | 23.0 | 20.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Moisture Variation From Optimum Moisture Content* | | 2.5% dry | 2.0% dry | 2.0% dry | 2.5% dry | 2.0% dry | 2.0% dry |
| ***Density Ratio ( $R_{HD}$ )*** | *%* | **98.0** | **98.0** | **98.0** | **98.0** | **98.0** | **98.0** |

*Material description*

No 10 - 15 Clay Fill

*AVRLOT HILF V1.10 MAR 13*



Approved Signatory : Justin Fry

# COMPACTION ASSESSMENT


***CIVIL GEOTECHNICAL SERVICES***

*6 - 8 Rose Avenue, Croydon 3136*


| | | | |
|---|---|---|---|
| | | *Job No* | 19604 |
| | | *Report No* | 19604/R004 |
| | | *Date Issued* | 16/10/2019 |
| *Client* | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | *Tested by* | JB |
| *Project* | ALBRIGHT - ESTATE STAGE 8B | *Date tested* | 19/09/19 |
| *Location* | TARNEIT | *Checked by* | JHF |

***Feature*** **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:00

*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/m³* | 1.88 | 1.94 | 1.96 | 1.97 | 2.03 | 1.97 |
| *Field moisture content* | *%* | 23.2 | 20.6 | 23.4 | 21.8 | 20.5 | 22.1 |

*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 | 12 | 6 | 7 | 14 | 9 |
| *Peak Converted Wet Density* | *t/m³* | 1.90 | 1.98 | 2.00 | 1.95 | 1.98 | 1.97 |
| *Adjusted Peak Converted Wet Density* | *t/m³* | - | 2.02 | 2.02 | 1.97 | 2.03 | 2.00 |
| *Optimum Moisture Content* | *%* | 26.0 | 22.0 | 23.5 | 22.0 | 21.5 | 22.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *Moisture Variation From Optimum Moisture Content* | 2.5% dry | 1.5% dry | 0.0% | 0.5% dry | 1.0% dry | 0.5% dry |

| ***Density Ratio ( $R_{HD}$ )*** | ***%*** | **98.5** | **96.0** | **97.0** | **100.0** | **100.0** | **99.0** |
|---|---|---|---|---|---|---|---|

*Material description*

No 16 - 21 Clay Fill

*AVRLOT HILF V1.10 MAR 13*

NATA

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Accreditation No 9909

Approved Signatory : Justin Fry