



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

24<sup>th</sup> August 2015

Our Reference: 15247:DK065

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING  
ARMSTRONG (STAGE 17) – MOUNT DUNEED**

Please find attached our Report No 15247/R001 that 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 late July 2015.

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.

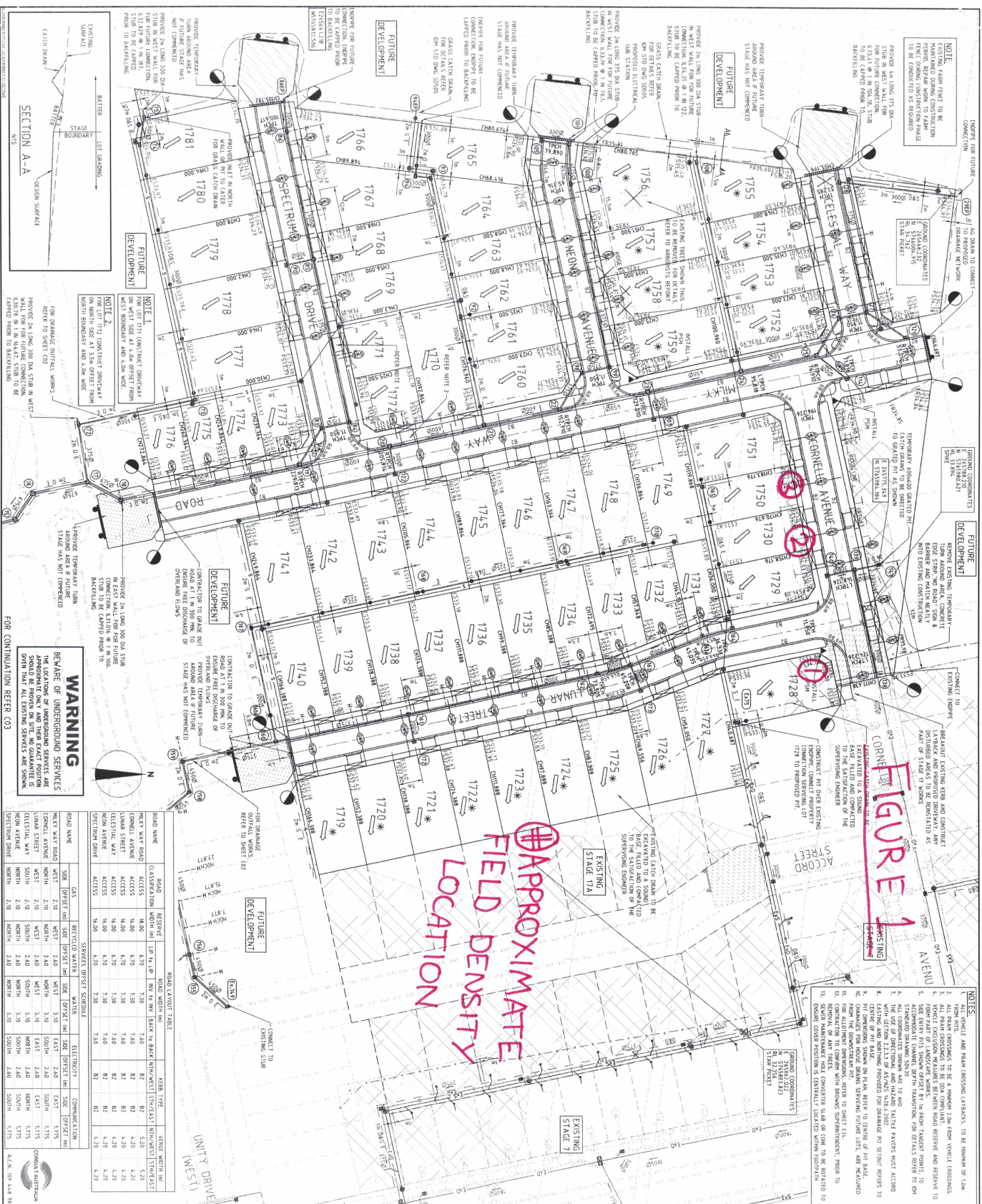
The site inspections and testing was performed by an experienced geotechnician from this office. Any areas that were deemed unsatisfactory were reworked and retested under their supervision. The testing was performed to the relevant Australian Standards and the accompanying test reports carry NATA endorsement. 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 filled 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 filled 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

Dino Kondzic

[illegible]

1:500 10 5 0 10 20 A1  
1:1000  
LAYOUT PLAN - 1  
DATE: 11/1/88  
BY: R. J. ALLEN  
CHECKED: R. J. ALLEN  
SCALE: 1" = 10'

**CALIBRE CONSULTING (MEIB) PTY LTD**  
Level 2, 55 Southbank Boulevard  
Southbank VIC 3006  
03 8793 0006

**CAIRO**  
CONSULTING



STAGE 17

# ARMSTRONG

**Properties**  
**COMMUNITIES DESIGNED FOR LIVING**



REF	DATE	COMMENTS
A	04/12/96	ISSUED TO CLIENT
CLIENT		

0	18/02/75	CONSTRUCTION ISSUE
C	16/02/75	COUNCIL COMMENTS DATED 11/02/75
B	03/02/75	COUNCIL COMMENTS DATED 22/01/75

3	03/03/15	STRUCTURAL FILL ALONG LOTS 7701 TO 1718 AMEND
2	26/02/15	EXISTING SURFACE LEVELS UPDATED
1	24/02/15	SURVEY LEVEL UPDATES

6	02/07/15	LOTS 1771,1772 BOUNDARIES & DRIVEWAYS AMENDED
5	27/04/15	LOT 1767 DRIVEWAY RELOCATED TO 12m FROM EAST BOUNDARY
4	16/03/15	LOT 1780 DRIVEWAY RELOCATED TO EAST

[illegible]

 Limit of Works

 Concrete Edge Strip with Subsoil Drain underneath "No Road" sign and Barrier

Overhead View

▲ Permanent Survey Mark  
Temporary Bench Mark

\* Allotment to be graded evenly in direction of fall to levels indicated

Direction of Fall

Overlaid Floor

Ex. Structural Fill > 200mm Deep

Proposed Driveway

 Intersection Threshold Treatment  
 Structural Fill > 200mm Deep

Top of Retaining Wall	Bottom of Retaining Wall
Tw95.39	Tw95.39
Bw95.39	Bw95.39

Station	Existing Surface Level	Finished Building Line Level	Finished Ridge Line Level
534.24			
534.25			
535.40			

Existing / Use to Remain

Existing To be Removed

Existing Swale Drain


Existing Sewer

Existing House Drain

Existing Gas  
Existing Telesma  
Existing Water  
Existing Stormwater Drain

**Tactile Paver - Hazard**  
Existing Electricity (Underground)  
Existing Electricity (Overhead)


 House Drain  
 Gas & Water Conduits  
 Traffic Paver - Directional

 Sewer, Maintenance Structures and Property Connection  
 Swale Drain  
 Property Inlet and Property Inlet

\_\_\_\_\_ G \_\_\_\_\_ Gas  
 \_\_\_\_\_ T \_\_\_\_\_ Telstra  
 \_\_\_\_\_ W \_\_\_\_\_ Water  
 \_\_\_\_\_ Stormwater Drain, etc

**LEGEND**

Electricity (Underground)

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## COMPACTION ASSESSMENT

### CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 15247  
Report No 15247/R001  
Date Issued 17/08/15

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	FCF
Project	ARMSTRONG, MT DUNEED - STAGE 17	Date tested	31/07/15
Location	MOUNT DUNEED	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	-	-	-
	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>	1.89	1.92	1.93	-	-	-
Field moisture content %	18.8	15.0	14.3	-	-	-

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	1	1	3	-	-	-
Peak Converted Wet Density t/m <sup>3</sup>	1.97	1.99	2.00	-	-	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	1.98	2.01	2.01	-	-	-
Optimum Moisture Content %	21.0	17.0	15.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	0.5% dry	-	-	-
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Density Ratio ( $R_{HD}$ )	%	95.5	95.5	96.0	-	-	-
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Material description

No 1 - 3 Clay Fill

AVRLOT HILF V1.10 MAR 13



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards. Accredited for compliance to ISO/IEC 17025. Accreditation No 9909

Approved Signatory : Justin Fry