



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

28<sup>th</sup> April 2020

Our Reference: 20229:NB729

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING**  
**ARMSTRONG – STAGE 44 (MOUNT DUNEED)**

Please find attached our Report No 20229/R001 which relates 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 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).

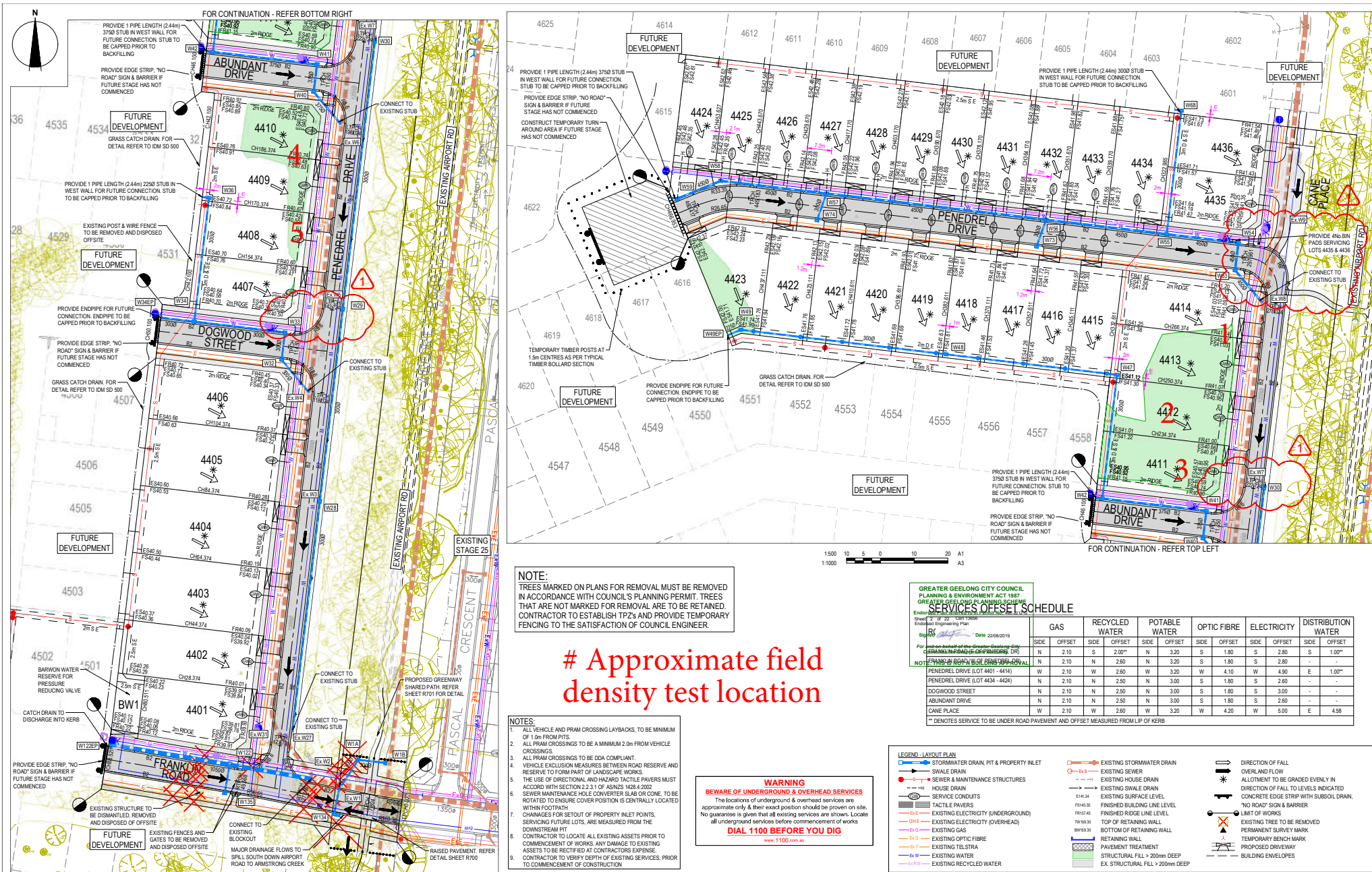
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

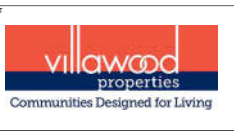
Civil Geotechnical Services

Nick Brock

# FIGURE 1



REVISION	DATE	ISSUE DESCRIPTION	DRAWN	DESIGNED	APPROVED
1	11/06/19	FOOTPATHS AMENDED TO ACCORD WITH GREENWAY PLANS	M.T.	M.T.	T.P.
2	07/11/19	CONSTRUCTION ISSUE	M.T.	M.T.	T.P.
3	24/10/19	COUNCIL COMMENTS DATED 04/10/19	M.T.	M.T.	T.P.
4	19/10/19	TENDER ISSUE	M.T.	M.T.	T.P.
5	26/10/19	ISSUED FOR APPROVAL	M.T.	M.T.	T.P.



**ARMSTRONG - STAGE 44 LAYOUT PLAN**

**ISSUED FOR CONSTRUCTION**

SCALE AT A1	DRAWN	DESIGNED
1:500 @ A1	M.TROUNCE	M.TROUNCE
PROJECT ENGINEER	PROJECT MANAGER	DATE FIRST ISSUE
T.PALIOS	T.PALIOS	26/09/18
PROJECT NO.	DRAWING NO.	REVISION
180016.44	R200	1



# COMPACTION ASSESSMENT

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 20229  
Report No 20229/R001  
Date Issued 28/04/2020

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	ARMSTRONG - STAGE 44	Date tested	24/04/20
Location	MOUNT DUNEED	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:55
---------	------------	-----------------	--------	-------------

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	4	5	-
Location	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	-
Field wet density t/m <sup>3</sup>	1.95	1.90	1.90	1.90	1.95	-
Field moisture content %	16.8	21.4	16.2	19.1	18.3	-

Test procedure AS 1289.5.7.1

Test No	1	2	3	4	5	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	19.0	19.0	-
Percent of oversize material wet	0	0	0	0	0	-
Peak Converted Wet Density t/m <sup>3</sup>	2.00	1.95	1.95	1.95	1.98	-
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	-	-	-	-	-	-
Optimum Moisture Content %	15.0	19.5	14.5	17.0	16.5	-

Moisture Variation From Optimum Moisture Content	2.0% wet	2.0% wet	2.5% wet	2.5% wet	2.0% wet	-
--	----------	----------	----------	----------	----------	---

Density Ratio ( $R_{HD}$ )	%	97.0	97.5	97.5	97.5	98.5	-
----------------------------	---	------	------	------	------	------	---

Material description

No 1 - 5 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 with ISO/IEC 17025 - Testing

Accreditation No 9909

*Justin Fry*

Approved Signatory : Justin Fry