



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

25<sup>th</sup> August 2020

Our Reference: 20091:NB793

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING  
RIVERDALE – STAGE 19 (TARNEIT)**

Please find attached our Report No's 20091/R001 and 20091/R002 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 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).

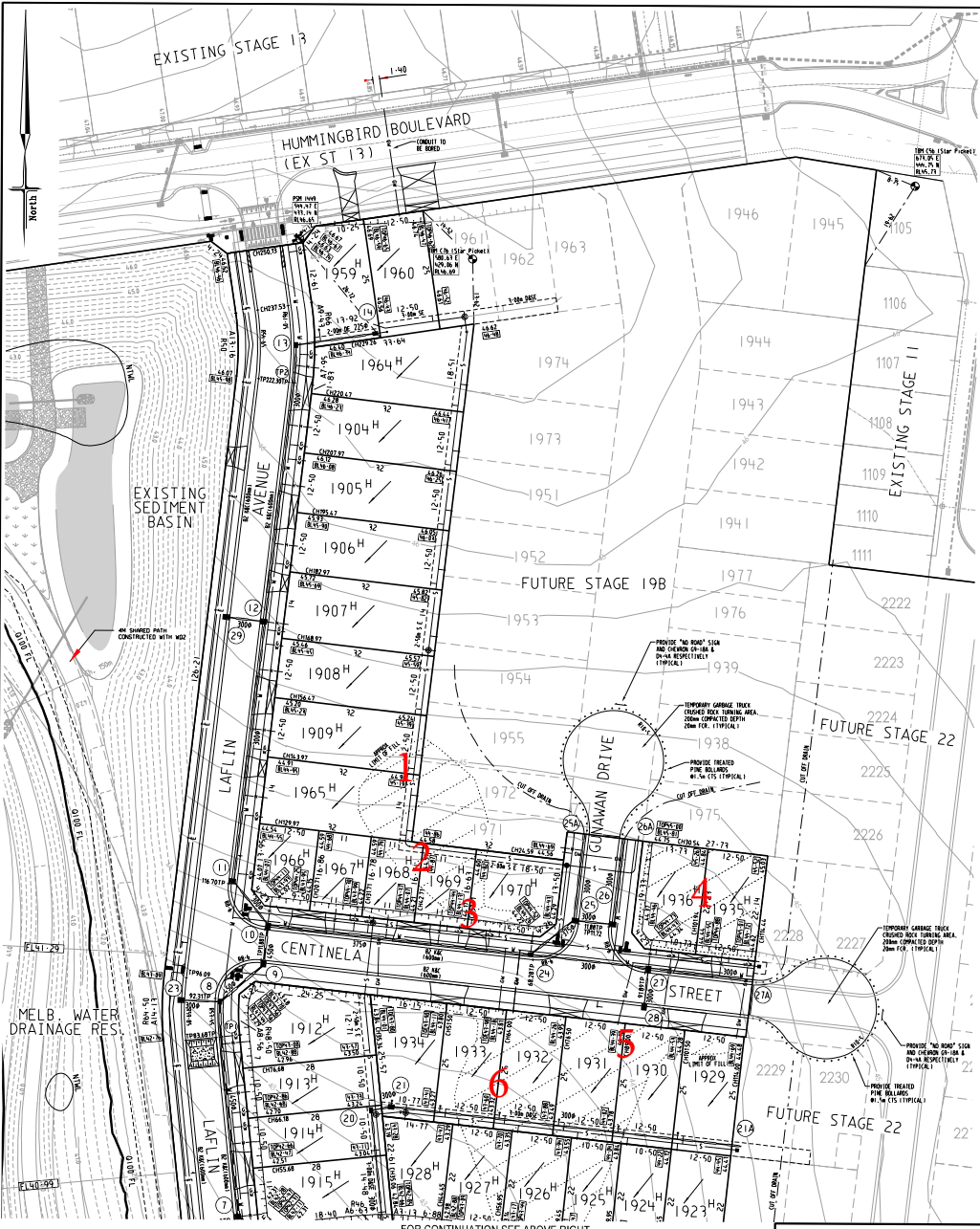
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

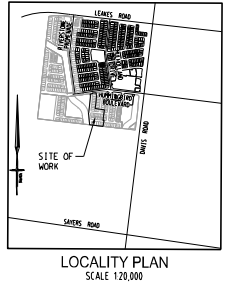
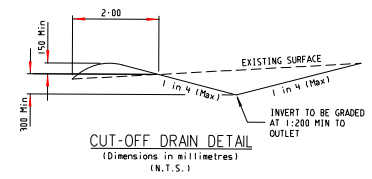
Nick Brock

# FIGURE 1



### SHEET INDEX

SHT NO	YR	DESCRIPTION
1	PB	DETAIL PLAN 1, LOCALITY PLAN & SERVICES OFFSET TABLE
2	PB	GENERAL NOTES, SPEED HPP DETAIL & TYPICAL SECTIONS
3	PB	INTERSECTION DETAILS
4	PB	LAFLIN AVENUE - LONGITUDINAL SECTION
5	PB	LAFLIN AVENUE - CROSS SECTIONS
6	PB	NYMAN CIR & CENTINELA ST - LONGITUDINAL SECTIONS
7	PB	NYMAN CIR & CENTINELA ST - CROSS SECTIONS
8	PB	GUAMAN DRIVE - LONGITUDINAL AND CROSS SECTIONS
9	PB	DRAINAGE LONGITUDINAL SECTIONS No. 1
10	PB	DRAINAGE LONGITUDINAL SECTIONS No. 2 & PITT SCHEDULE
11	PB	SEWAGE & LINDMARKING PLAN

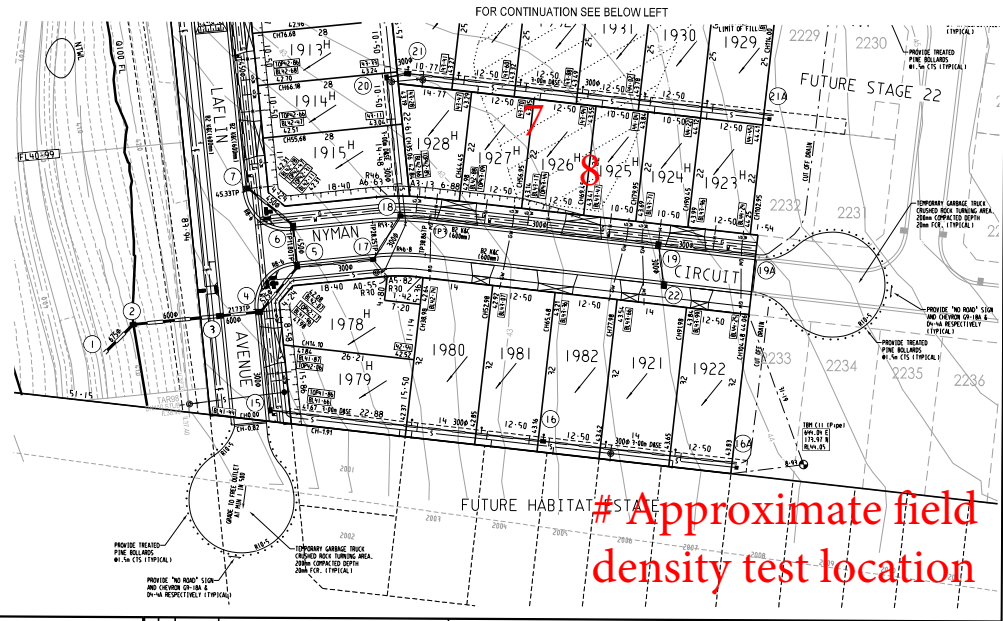


### SERVICES OFFSETS AND LOCATIONS

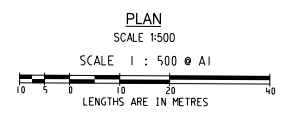
STREET NAME	OBSEVRY	WATER	GAS	RECREATION	FIBRE TO THE HOME	DK. OF KERB	JOINT VRENCING	STREET CLASSIFICATION
LAFLIN AVENUE	16-00	1-20 E	2-70 E	2-20 E	2-45 W	1-00 BOX	1-85 W	G & W, FTH & E STREET - LEVEL 1
CENTINELA STREET	16-00	1-20 N	2-70 N	2-20 N	2-60 S	1-00 BOX	1-85 S	G & W, FTH & E STREET - LEVEL 1
NYMAN CIRCUIT (LOT 1979)	16-00	1-20 N	2-70 N	2-20 N	2-40 S	1-00 BOX	1-85 S	G & W, FTH & E STREET - LEVEL 1
GUAMAN DRIVE	16-00	1-20 E	2-70 E	2-20 E	2-60 W	1-00 BOX	1-85 W	G & W, FTH & E STREET - LEVEL 1

**ATTENTION TO CONTRACTOR**

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



**# Approximate field density test location**



**WARNING**  
BEWARE OF UNDERGROUND SERVICES  
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

### SYMBOL LEGEND

Drains	—
Sewer <300	—
Sewer >300	—
Water	—
House Drain	—
Property Inlet	—
Street Sign	—
Retaining Wall	—
Conduits 50mm	—
Conduits 100mm	—
Ex Gas/Elect/Tel	—
Ex/Natural/FS Level	—
FS # Building Line	—
Top/Toe of Balter	—
Top Ret. Wall Level	—
100yr Flood Level	—
Fill Prop/Ex (0.2m depth)	—
Cut Prop/Ex (> 0.2m depth)	—

VER	DATE	REMARKS

**breese pitt dixon pty ltd**  
land surveyors      civil engineers

1/19 cato street  
hawthorn east, 3123  
telephone 8823 2300  
fax no. 8823 2310

**RIVERDALE VILLAGE STAGE 19**

MUNICIPALITY: WYNDHAM  
REFERENCE: 8554 E/19

DETAIL PLAN & SERVICES OFFSET TABLE

MELWAY REF. 234-G-2  
SURVEY BPD  
DESIGN GL  
DRAWN GL

CHECKED      SCALE AS SHOWN      DATUM AHD      DATE OCT'18      SHEET 1 OF 11



# COMPACTION ASSESSMENT

Job No 20091  
 Report No 20091/R001  
 Date Issued 14/05/2020

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	RIVERDALE - STAGE 19	Date tested	01/04/20
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:00
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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
Field wet density	t/m <sup>3</sup>	1.77	1.74	1.78	1.65	1.70
Field moisture content	%	31.9	28.9	30.0	27.7	26.0

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m <sup>3</sup>	1.80	1.77	1.81	1.69	1.74
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	34.5	31.5	32.5	29.5	29.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry	2.5% dry
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Density Ratio (R <sub>HD</sub> )	%	98.5	98.5	98.0	97.5	98.0	98.0
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Material description

No 1 - 6 Clay Fill
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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

Approved Signatory : Justin Fry



# COMPACTION ASSESSMENT

Job No 20091  
 Report No 20091/R002  
 Date Issued 27/04/2020

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	RIVERDALE - STAGE 19	Date tested	01/04/20
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	-	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate depth below FSL						
Measurement depth	mm	175	175	-	-	-
Field wet density	t/m <sup>3</sup>	1.77	1.75	-	-	-
Field moisture content	%	23.0	26.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	7	8	-	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	-	-	-
Percent of oversize material	wet	0	0	-	-	-
Peak Converted Wet Density	t/m <sup>3</sup>	1.80	1.80	-	-	-
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	25.5	29.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	-	-	-	-
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Density Ratio (R <sub>HD</sub> )	%	98.5	97.0	-	-	-
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Material description

No 7 - 8 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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