



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

11th May 2022

Our Reference: 21408:NB1240

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RIVERDALE – STAGE 23 (TARNEIT)

Please find attached our Report No's 21408/R001 to 21408/R003 which relate 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 commenced in April 2021 and was completed in May 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).

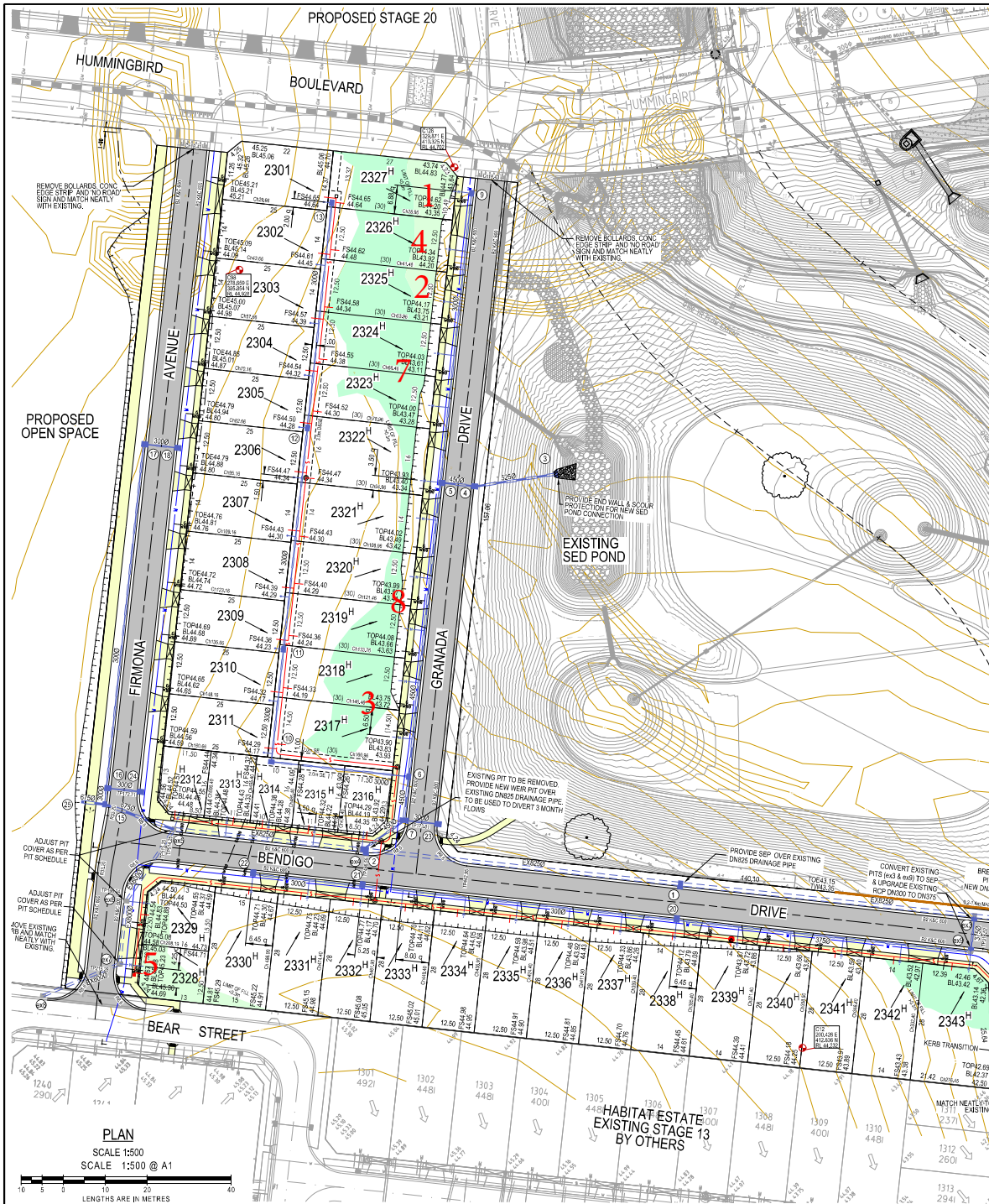
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

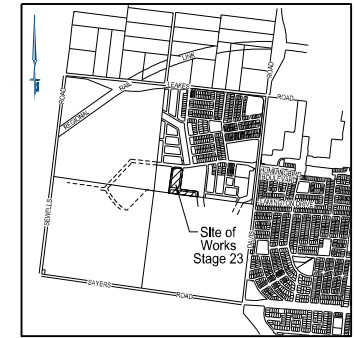
Nick Brock

FIGURE 1



SHEET INDEX

SHT No.	PER	DESCRIPTION
1	P2	DETAIL PLAN, LOCALITY PLAN, SERVICES SCHEDULE & SHEET INDEX
2	P2	GENERAL NOTES, PAVEMENT DETAILS & TYPICAL SECTIONS
3	P2	INTERSECTION DETAILS - NO.1
4	P2	INTERSECTION DETAILS - NO.2
5	P2	FIRMIONA AVENUE - LONGITUDINAL SECTION
6	P2	FIRMIONA AVENUE - CROSS SECTIONS - NO.1
7	P2	FIRMIONA AVENUE - CROSS SECTIONS - NO.2
8	P2	BENDIGO DRIVE - LONGITUDINAL SECTION
9	P2	BENDIGO DRIVE - CROSS SECTIONS - NO.1
10	P2	BENDIGO DRIVE - CROSS SECTIONS - NO.2
11	P2	GRANADA DRIVE - LONGITUDINAL SECTION
12	P2	GRANADA DRIVE - CROSS SECTIONS
13	P2	DRAINAGE LONGITUDINAL SECTIONS - NO.1
14	P2	DRAINAGE LONGITUDINAL SECTIONS - NO.2
15	P2	DRAINAGE LONGITUDINAL SECTIONS - NO.3
16	P2	PIT SCHEDULE
17	P2	STORAGE & LINEMARKING PLAN

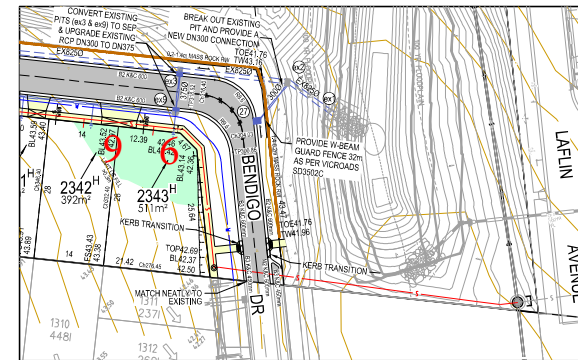


Approximate field density test location

SERVICES OFFSETS AND LOCATIONS

Location	Gas		Water		Communications		Electricity		BOK	Road Width	Joint Trenching	Street Classification
	MDV	DW	MDV	DW	Cables	Pipes	Cables	Pipes				
FIRMIONA AVENUE (Lots 2301-2312)	2.20 E	2.70 E	3.20 E	2.85 W	1.80 E	3.60 W	1.00 BOK	4.35 E	4.35 E	17.00	G & W, FTH & E	STREET LEVEL
FIRMIONA AVENUE (Lots 2329-2339)	2.20 E	2.70 E	3.20 E	2.85 W	1.80 E	3.60 W	1.00 BOK	4.35 E	4.35 E	17.00	G & W, FTH & E	STREET LEVEL
GRANADA DRIVE (Lots 2327-2317)	2.20 W	2.70 W	3.20 W	0.30 E	3.20 W	1.05 E	1.00 BOK	4.35 W	4.35 W	14.50	G & W, FTH & E	STREET LEVEL
GRANADA DRIVE (FROM LOT 2317)	2.20 W	2.70 W	3.20 W	0.30 E	3.20 W	1.05 E	1.00 BOK	4.35 W	4.35 W	14.50	G & W, FTH & E	STREET LEVEL
BENDIGO DRIVE (Lots 2312 to 2316)	2.20 S	2.70 S	3.20 S	1.85 N	1.80 S	2.60 N	1.00 BOK	4.35 S	4.35 S	16.00	G & W, FTH & E	STREET LEVEL
BENDIGO DRIVE (Lots 2334 to 2343)	2.20 S	2.70 S	3.20 S	0.35 N	1.80 S	1.10 N	1.00 BOK	4.35 S	4.35 S	14.50	G & W, FTH & E	STREET LEVEL
BENDIGO DRIVE (Lot 2343)	3.60 W	4.10 W	4.60 W	1.85 W	1.85 W	2.55 W	1.00 BOK	6.55 W	6.55 W	14.50	G & W, FTH & E	STREET LEVEL

NOTE: a) At the curb bowl where water and gas mains pass, the watermain offset is to be increased by 0.5 metres.
b) * Indicates offsets from back of kerb where services do not run parallel to the boundary.
c) * Indicates Telecommunication pits placed within concrete footpath.



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.

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 about a sewer access chamber surround or similar structure, an expansion joint of approved material shall be provided between the two faces.

SYMBOL LEGEND

Drains	Ex/Natural F/S Level
Sewer < 3000	FS @ Building Line
Sewer > 3000	Top/Toe of Batter
Water (DW)	Top Ret. Wall Level
Water (NDW)	100yr Flood Level
House Drain	Proposed (<0.3m @ 3.0m)
Property Eject	Cut Proposed
Street Sign	Asphalt Surface Prop
PSM	Concrete Surface Prop
Road Rail Wall	Concrete Surface Prop (Paths/Overways/Slabs)
Shower Rail Wall	Tree To Be Retained with Tree Protection Zone (TPZ)
Conduits 50mm	
Conduits 100mm	
Street Tree (with/without Pruning Inquiries (Refer Data))	
Ex Drain	
Ex Water/DW/NDW	
Ex Sewer/Gas	
Ex Elec/Cable	



breese pitt dixon pt. ltd.
land surveyors civil engineers

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

RIVERDALE VILLAGE
STAGE 23
DETAIL DESIGN

MUNICIPALITY
WYNDHAM
REFERENCE
8557 E/23

MELWAY REF. 234-F-2
SURVEY BPD
DESIGN D.P
DRAWN D.P
CHECKED

SCALE AS SHOWN DATUM AHD DATE NOV 20 SHEET 1 OF 17 P2



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21408
Report No 21408/R001
Date Issued 06/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	RIVERDALE - STAGE 23	Date tested	04/06/21
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	1	2	3	-	-	-
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/m ³	1.89	1.93	1.94	-	-	-
Field moisture content %	28.0	30.2	30.3	-	-	-

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	0	0	0	-	-	-
Peak Converted Wet Density t/m ³	1.95	1.95	2.00	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	28.0	30.5	30.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.5% wet	-	-	-
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Density Ratio (R_{HD})	%	97.0	99.0	97.0	-	-	-
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Material description

No 1 - 3 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21408
Report No 21408/R002
Date Issued 06/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	RIVERDALE - STAGE 23	Date tested	07/06/21
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	4	5	6	-	-	-
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/m ³	1.93	1.92	1.92	-	-	-
Field moisture content %	21.6	21.1	22.3	-	-	-

Test procedure AS 1289.5.7.1

Test No	4	5	6	-	-	-
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/m ³	2.02	1.99	2.00	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	23.5	23.5	25.0	-	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	95.5	96.5	96.0	-	-	-
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Material description

No 4 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21408
Report No 21408/R003
Date Issued 11/05/2022

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	RIVERDALE - STAGE 23	Date tested	06/05/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:30
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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/m ³	2.15	2.13	2.17	-	-	-
Field moisture content %	16.4	16.0	16.6	-	-	-

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/m ³	2.19	2.15	2.20	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	18.0	18.0	18.5	-	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.0% dry	-	-	-
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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_{HD})	%	98.5	99.0	98.5	-	-	-
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Material description

No 7 - 9 Clay Fill

AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry