



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

26th April 2018

Our Reference: 18134:NB181

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RIVERDALE – STAGE 11 (TARNEIT)**

Please find attached our Report No's 18134/R001 and 18134/R002 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 March 2018 and was completed in April 2018.

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.

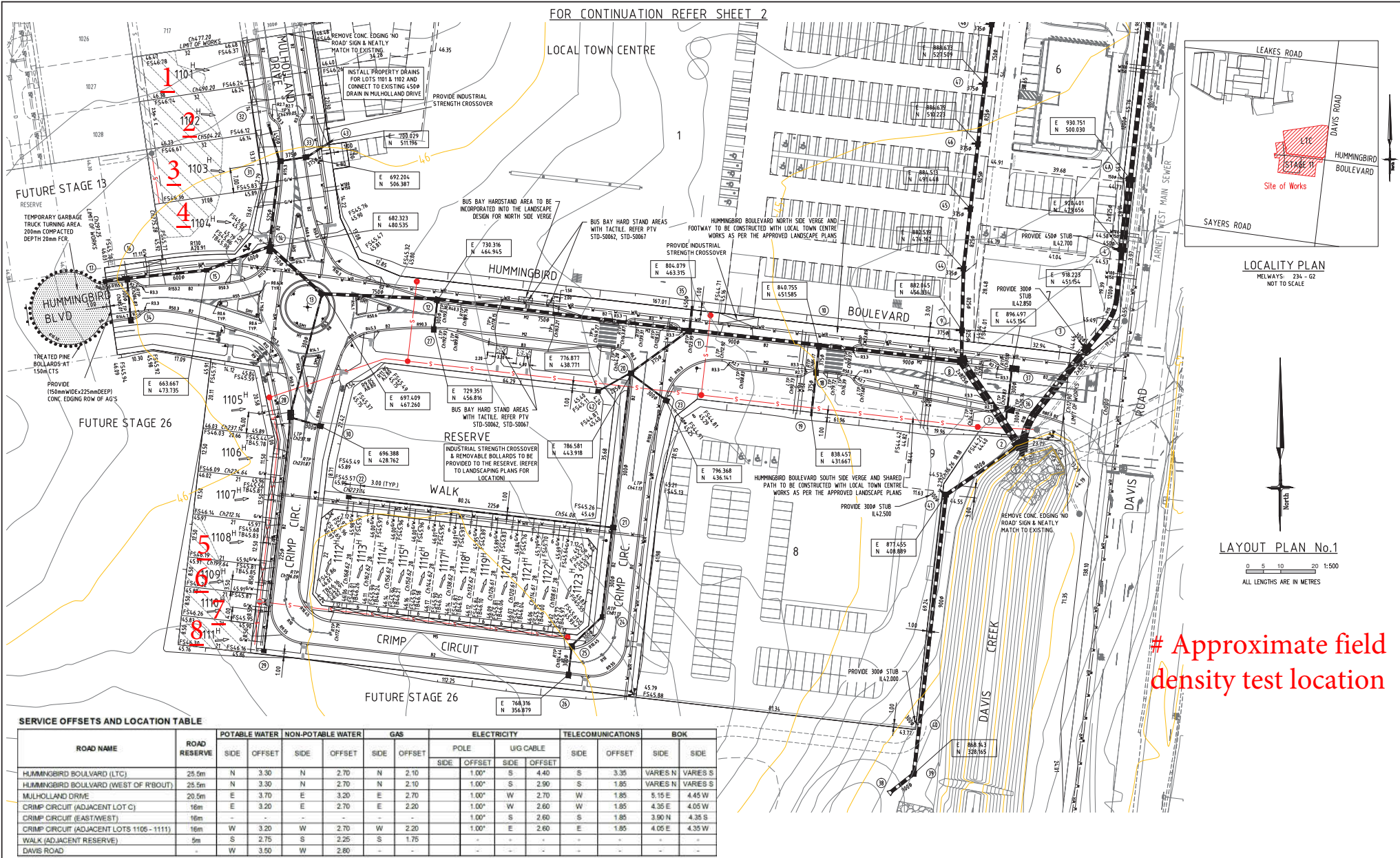
Civil Geotechnical Services

A handwritten signature in blue ink, appearing to be 'Nick Brock', written over a light blue circular stamp.

Nick Brock

FIGURE 1

FOR CONTINUATION REFER SHEET 2



Approximate field density test location

SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	ROAD RESERVE	POTABLE WATER		NON-POTABLE WATER		GAS		ELECTRICITY		TELECOMMUNICATIONS		BOK	
		SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	POLE SIDE	UG CABLE OFFSET	SIDE	OFFSET	SIDE	SIDE
HUMMINGBIRD BOULEVARD (LTC)	25.5m	N	3.30	N	2.70	N	2.10	1.00° S	4.40	S	3.35	VARIES N	VARIES S
HUMMINGBIRD BOULEVARD (WEST OF R'BOUT)	25.5m	N	3.30	N	2.70	N	2.10	1.00° S	2.90	S	1.85	VARIES N	VARIES S
MULHOLLAND DRIVE	20.5m	E	3.70	E	3.20	E	2.70	1.00° W	2.70	W	1.85	5.15 E	4.45 W
CRIMP CIRCUIT (ADJACENT LOT C)	16m	E	3.20	E	2.70	E	2.20	1.00° W	2.60	W	1.85	4.35 E	4.05 W
CRIMP CIRCUIT (EASTWEST)	16m	-	-	-	-	-	-	1.00° S	2.60	S	1.85	3.90 N	4.35 S
CRIMP CIRCUIT (ADJACENT LOTS 1105 - 1111)	16m	W	3.20	W	2.70	W	2.20	1.00° E	2.60	E	1.85	4.05 E	4.35 W
WALK (ADJACENT RESERVE)	5m	S	2.75	S	2.25	S	1.75	-	-	-	-	-	-
DAVIS ROAD	-	W	3.50	W	2.80	-	-	-	-	-	-	-	-

1. TELEPHONIC AND ELECTRICITY CABLES ARE TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRAWINGS.

2. GAS AND WATER MAINS ARE TO BE CONSTRUCTED IN A COMMON TRENCH.

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 by a licenced surveyor and/or set out checked by a licenced surveyor 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.

SYMBOL LEGEND

Drains	Sewer < 300	Potable Water	Recycled Water	House Drain	Property Inlet	Street Sign	PSM	Retaining Wall	Conduits 50mm	Conduits 100mm	Ex Gas/Diesel	Exist Surface Level	Prop Surface Level	Prop Top Batter Level	Prop Top Batter Level	Prop Top Retaining Wall Level	Fill > 150mm	Cut > 150mm
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

NO.	DATE	REMARKS	CHECKED
B	31-01-18	HOUSE DRAINS RELOCATED FOR LOTS 1109 & 1110	
A	24-01-18	ISSUED FOR CONSTRUCTION	

Council Ref No-
breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 calo street
hawthorn east, 3103
telephone 8823 2300
fax no. 8823 2310

MELBAY REF. 234 G-2
SURVEY BPD
DESIGN M.A.
DRAWN M.A.

RIVERDALE VILLAGE
STAGE 11
LAYOUT PLAN No.1, LOCALITY PLAN & SERVICE OFFSETS TABLE

MUNICIPALITY **WYNDHAM**
REFERENCE **8554** E/11

SCALE AS SHOWN DATUM AHD DATE SEP '17 SHEET 1 OF 17 B



COMPACTION ASSESSMENT

Job No 18134
 Report No 18134/R001
 Date Issued 24/04/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by JB
 Date tested 13/04/18
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project RIVERDALE - STAGE 11
 Location TARNEIT

Feature EARTHWORKS *Layer thickness* 200 mm *Time:* 10:30

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/m ³	1.79	1.81	1.80	1.75	1.78	1.77
Field moisture content %	26.7	28.3	24.9	23.8	28.2	27.1

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	11	10	0	0	0
Peak Converted Wet Density t/m ³	1.82	1.83	1.84	1.75	1.76	1.78
Adjusted Peak Converted Wet Density t/m ³	1.85	1.88	1.88	-	1.81	-
Optimum Moisture Content %	29.5	29.0	26.0	26.5	30.5	30.0

Moisture Variation From Optimum Moisture Content	2.5% dry	0.5% dry	1.0% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD}) %	96.5	96.0	95.5	100.0	98.0	99.5
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Material description

No 1 - 6 Clay Fill



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



COMPACTION ASSESSMENT

Job No 18134
 Report No 18134/R002
 Date Issued 26/04/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by JB
 Date tested 13/04/18
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project RIVERDALE - STAGE 11
 Location TARNEIT

Feature EARTHWORKS **Layer thickness** 200 mm **Time:** 11:28

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 ³	1.82	1.82	-	-	-	-
Field moisture content %	28.2	27.0	-	-	-	-

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	5	0	-	-	-	-
Peak Converted Wet Density t/m ³	1.84	1.77	-	-	-	-
Adjusted Peak Converted Wet Density t/m ³	1.86	1.82	-	-	-	-
Optimum Moisture Content %	30.0	30.0	-	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	-	-	-	-
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Density Ratio (R_{HD}) %	98.0	100.5	-	-	-	-
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Material description

No 7 - 8 Clay Fill



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