

CIVIL GEOTECHNICAL SERVICES ABN 26 474 013 724

PO Box 678 Croydon Vic 3136 Telephone: 9723 0744 Facsimile: 9723 0799

5th December 2019

Our Reference: 19336:NB618

Winslow Constructors Pty Ltd 50 Barry Road CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING RIVERDALE – STAGE 17 (TARNEIT)

Please find attached our Report No's 19336/R001 & 19336/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 was performed in December 2019.

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).

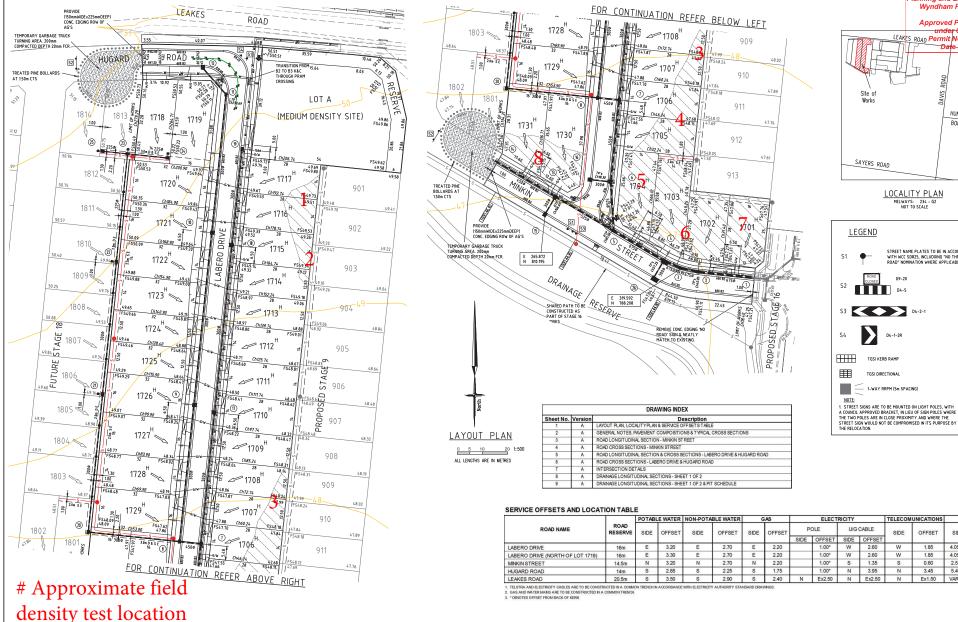
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



2.60 W

1.85 4.05 W 4.35 E 1.35 0.60 2.55 S 4.35 N 3.95 3.45 5 40 S 1.80 N N Ex2.50 Ex1.50 VARIES VARIES

Council Ref No.-

OFFSET

SIDE

Wyndham Planning Scheme

Approved Plan As Required

HUMMINGBIRD

BOULEVARD

LOCALITY PLAN

STREET NAME PLATES TO BE IN ACCORDANCE

LEAKES ROAD Permit No WYP9457/16

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

rMBOL LEGEND pins wer < 300 wer > 300 table Water	Prop Edit	Exist Surface Level + 2657 — S — Prop Surface Level + 26867 — S — Prop Top Batter Level + 26867						t la	pty. Itd. vil engineers	1/19 caro street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310		
cycled Water use Drain	-RW	Prop Top Retaining Wal		DWENTS			MELWAY REF.	234 G-2	RIVER	RDALE VIL	LAGE	MUNICIPALITY WYNDHAM
operty Inlet reet Sian	-	Fill > 150mm		ğ			SURVEY	BPD		STAGE 17		WINDHAM
M taining Wall	¥ ¥	Cut > 150mm		ľ			DESIGN	M.A.	LAY0	UT PLAN, LOCALITY	PLAN	REFERENCE E /
nduits 50mm nduits 100mm	— 6V —— 6V — — V100—			-	-	-	DRAWN	M.A.	& S	ERVICE OFFSETS TA	ABLE	8554 1/17
Gas/Elect/Tel	- G — E — T −			VEF	DATE	REMARKS	CHECKED		SCALE AS SHOWN	DATUM AHD	DATE MAY '17	SHEET 1 OF 9 A



COMPACTION ASSESSMENT

 CIVIL GEOTECHNICAL SERVICES
 Job No
 19336

 6 - 8 Rose Avenue, Croydon 3136
 Report No
 19336/R001

 Client
 WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Tested by
 JB

ProjectRIVERDALE - STAGE 17Date tested03/12/19LocationTARNEITChecked byJHF

Feature EARTHWORKS Layer thickness 200 mm Time: 08:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		1	2	3	4	5	6
Location							
		REFER	REFER	REFER	REFER	REFER	REFER
		TO	TO	TO	TO	TO	TO
		FIGURE 1					
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	175
Field wet density	t/m³	1.75	1.72	1.78	1.81	1.77	1.75
Field moisture content	%	24.5	26.6	22.1	24.2	24.9	23.7

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	0	0	0	0	0
Peak Converted Wet Density	t/m³	1.79	1.76	1.79	1.83	1.79	1.78
Adjusted Peak Converted Wet Density	t/m³	-	-	-	-	-	-
Optimum Moisture Content	%	26.5	28.5	24.0	26.0	27.5	26.0

Moisture Variation From	2.0%	2.0%	2.0%	2.0%	2.5%	2.5%
Optimum Moisture Content	dry	dry	dry	dry	dry	dry

Density Ratio (R _{HD}) %	97.5	98.0	99.5	99.0	99.0	98.5

Material description

No 1 - 6 Clay Fill

NATA T

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 19336 **CIVIL GEOTECHNICAL SERVICES** Report No 19336/R002 Date Issued 05/10/2019 6 - 8 Rose Avenue, Croydon 3136 WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Client Tested by JB Project **RIVERDALE - STAGE 17** Date tested 04/12/19 Location **TARNEIT** Checked by JHF

Feature **EARTHWORKS** Layer thickness 200 mm Time: 09:00

Test No		7	8	-	-	-	-
Location		REFER TO FIGURE 1	REFER TO				
Approximate depth below FSL							
Measurement depth	mm	175	175	-	-	-	
Field wet density	t/m³	1.83	1.77	-	-	-	-
Field moisture content	%	24.7	30.4	-	-	-	-
Test procedure AS 1289.5.7.1 Test No Compactive effort		7	8	- Stan	- ndard	-	-
Oversize rock retained on sieve	mm	19.0	19.0	-	-	-	-
Percent of oversize material	wet	0	0	-	-	-	-
Peak Converted Wet Density	t/m³	1.82	1.81	-	-	-	-
Adjusted Peak Converted Wet Density	t/m³	-	_	-	-	_	
Optimum Moisture Content	%	26.5	28.0		-	-	-
Moisture Variation From		2.0%	2.5%	-	-	-	-
Optimum Moisture Content		dry	dry				
Density Ratio (R _{HD})	%	101.0	98.0				
- " - " / - \				_	-	-	4 –

Material description

No 7 - 8 Clay Fill



AVRLOT HILF V1.10 MAR 13

Accreditation No 9909