



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

9th March 2021

Our Reference: 20541:NB909

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RATHDOWNE – STAGE 6B (WOLLERT)

Please find attached our Report No's 20541/R001 to 20541/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 October 2020 and was completed in February 2021.

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).

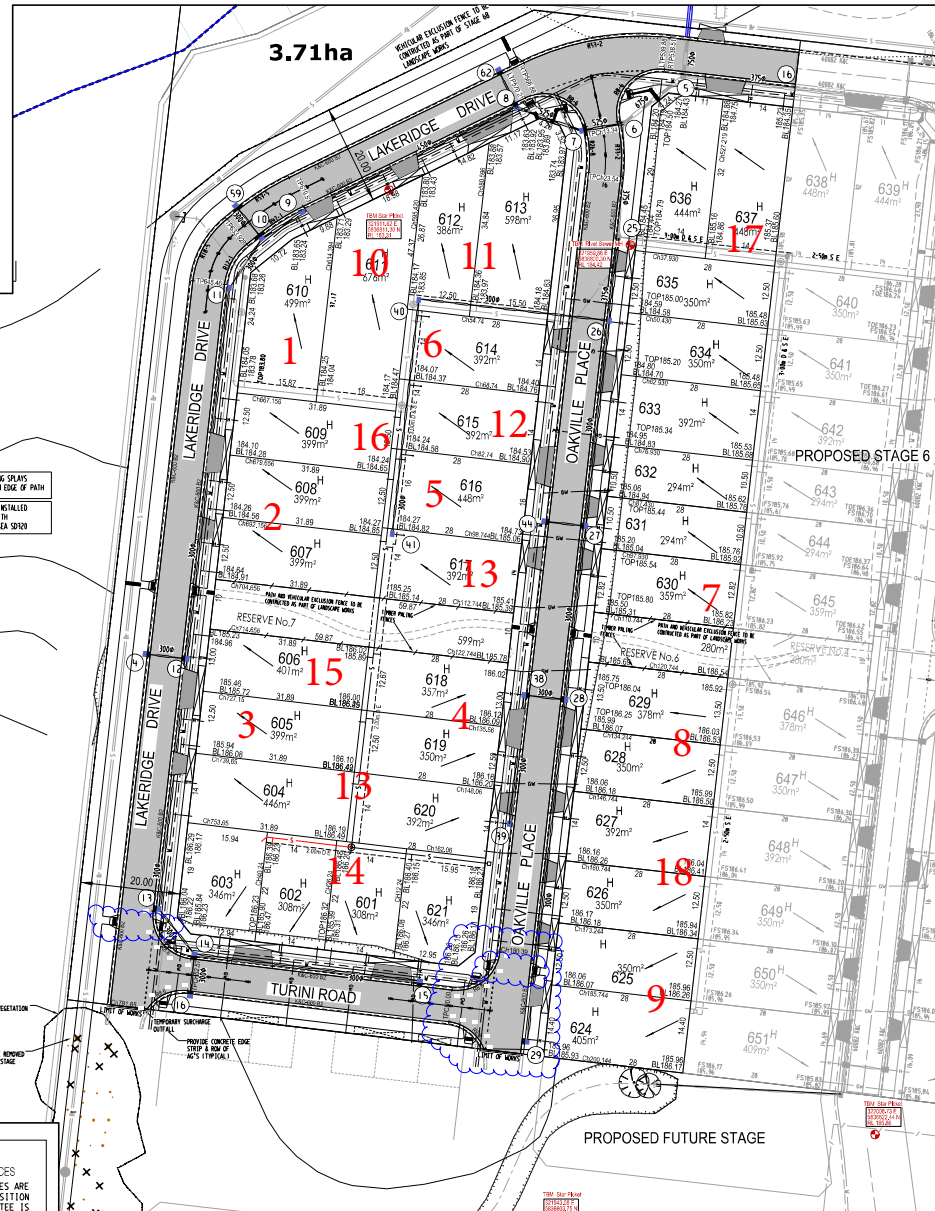
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

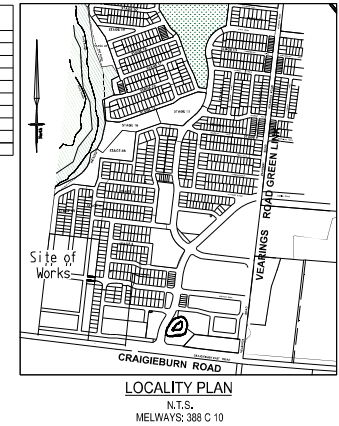
Nick Brock

FIGURE 1

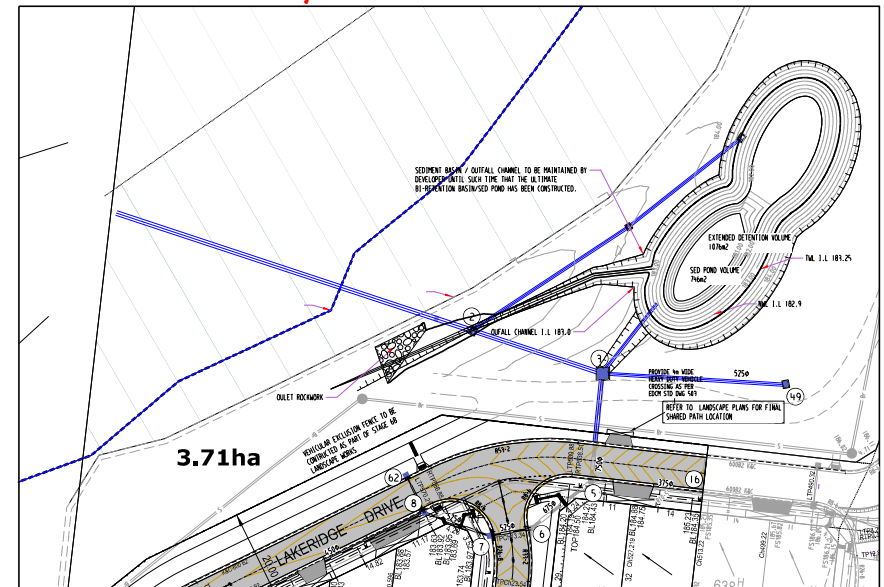
FOR CONTINUATION REFER TO INSET RIGHT



SHEET	VER	DESCRIPTION
1	C	DETAIL PLAN SHEET 1
2	A	NOTES AND TYPICAL SECTIONS
3	B	INTERSECTION DETAILS 1
4	A	LAKERIDGE DRIVE - LONGITUDINAL SECTIONS
5	A	LAKERIDGE DRIVE - CROSS SECTIONS
6	A	OAKVILLE PLACE - LONGITUDINAL SECTION
7	A	OAKVILLE PLACE - CROSS SECTIONS
8	B	DRAINAGE LONGITUDINAL SECTIONS 1
9	B	DRAINAGE LONGITUDINAL SECTIONS 2, PIT SCHEDULE
10	B	SEWAGE AND LINEMARKING PLAN



Approximate field density test location



FOR CONTINUATION REFER TO ABOVE LEFT

SERVICES OFFSETS AND LOCATIONS

Location	Gas	Water		Telecommunications		Electricity		BOK	Road Width	Joint Trenching	Street Classification
		NDW	EW	Cables	Pis	Cables	Poles				
OAKVILLE PLACE	2.20 NW	2.70 NW	3.20 NW	1.85 E	1.80 E/W	2.45 E	1.00 BOK	4.35 E	16.00	GAW FTH+GE	LEVEL 1
LAKERIDGE DRIVE	2.25 S/E	2.70 S/E	3.20 S/E	5.85 NW	1.80 S/E	6.45 NW	1.00 BOK	6.05 NW	20.00	GAW FTH+GE	LEVEL 1
LAKERIDGE DRIVE LOTS 636-637	1.70 S	2.20 S	2.65 S	0.8 S	0.8 S	0.80 N	1.00 BOK	1.05 N	13.50	GAW FTH+GE	LEVEL 1

NOTE: a) At the coast town where water and gas mains pass, the watermain offset 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 Telecommunications pits placed within concrete footpaths.

WARNING

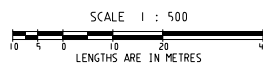
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

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.

PLAN

SCALE 1:500



SYMBOL LEGEND

Prop	Exist
Drains <300	Drains >300
Water	Water
House Drain	House Drain
Property Inlet	Property Inlet
Street Sign	Street Sign
Retaining Wall	Retaining Wall
Conduit to 100mm	Conduit to 100mm
Ex Gas/Elect/Tel	Ex Gas/Elect/Tel

VER	DATE	REMARKS	CHECKED
C	21-12-20	COUNCIL COMMENTS, SOUTHERN INTERSECTION	RGW
B	15-10-20	VARIOUS PIT AMENDMENTS, BATTER DETAILED 401	RGW
A	24-09-20	ISSUE FOR CONSTRUCTION	RGW



breese pitt dixon pty. ltd.
land surveyors civil engineers

RATHDOWNE ESTATE
STAGE 6B
DETAIL PLAN

MELWAY REF. 388-C-10

1/19 colo street
howthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MUNICIPALITY
WHITTLESEA
REFERENCE
9365 E/68
SHEET 1 OF 10 C



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 20541
Report No 20541/R001
Date Issued 25/12/2020

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	RATHDOWNE - STAGE 6B	Date tested	02/12/20
Location	WOLLERT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:56
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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	175
Field wet density t/m ³	2.04	2.07	2.07	2.00	2.08	2.06
Field moisture content %	24.3	25.1	25.3	22.8	23.3	19.9

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/m ³	2.09	2.11	2.07	2.06	2.10	2.10
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	26.5	26.5	28.0	25.0	26.0	22.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	2.5% dry	2.0% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.0	98.0	100.0	97.0	99.0	98.0
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Material description

No 1 - 6 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

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 20541
Report No 20541/R002
Date Issued 09/02/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	RATHDOWNE - STAGE 6B	Date tested	22/01/21
Location	WOLLERT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:33
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	9	10	11	12
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	2.07	2.08	2.10	2.07	2.02	2.06
Field moisture content %	28.7	27.4	26.9	27.6	23.4	26.6

Test procedure AS 1289.5.7.1

Test No	7	8	9	10	11	12
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/m ³	2.15	2.17	2.13	2.12	2.11	2.10
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	31.0	29.5	29.0	30.5	26.0	29.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry	2.0% dry
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Density Ratio (R_{HD})	%	96.0	96.0	98.5	97.5	95.5	98.5
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Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 20541
Report No 20541/R003
Date Issued 09/03/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	RATHDOWNE - STAGE 6B	Date tested	03/02/21
Location	WOLLERT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:49
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	14	15	16	17	18
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	1.84	1.85	1.88	1.85	1.82	1.84
Field moisture content %	17.2	18.9	16.8	19.6	15.9	20.0

Test procedure AS 1289.5.7.1

Test No	13	14	15	16	17	18
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/m ³	1.91	1.87	1.91	1.89	1.82	1.92
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	17.0	19.0	17.0	21.5	18.5	20.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	2.0% dry	2.5% dry	0.5% dry
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Density Ratio (R_{HD})	%	96.5	99.0	98.5	97.5	100.0	95.5
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Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



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