



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

5th October 2022

Our Reference: 22481:NB1356

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
DELARAY – STAGE 20 (CLYDE NORTH)

Please find attached our Report No's 22481/R001 and 22481/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 July 2022 and was completed in September 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



AMENDED PLAN

City of Casey
Approved By: Khurshedul Alam
File No: SEng00025/22 & PlnA00753/14
Date: 28/06/2022

AMENDED PLAN
DRAWING NO: R5808



LOCALITY PLAN
SCALE: 1: 10,000
MELWAYS: 135 D4

SHEET INDEX

SHT No.	VER	DESCRIPTION
1	B	DETAIL PLAN, LOCALITY PLAN, SERVICES SCHEDULE & SHEET INDEX
2	B	GENERAL NOTES & TYPICAL SECTIONS
3	A	TYPICAL SECTIONS
4	B	INTERSECTION DETAILS - Sheet 1
5	B	ZIGA STREET & PRADO AVENUE - LONGITUDINAL SECTION
6	A	ZIGA STREET - CROSS SECTIONS
7	A	PRADO AVENUE - CROSS SECTIONS
8	B	TOKIEDO LANE DETAILS
9	B	DRAINAGE LONGITUDINAL SECTIONS - Sheet 1
10	B	DRAINAGE LONGITUDINAL SECTIONS - Sheet 2
11	B	SIGNAGE & LINE MARKING PLAN

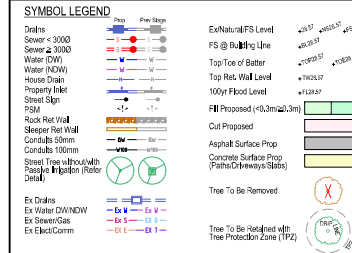
Approximate field
density test location

SERVICES OFFSETS AND LOCATIONS

Location	Gas	Water		Communications		Electricity		BOK	Road Width	Joint Trenching	Street Classification
		NDW	DIV	Cables	Pits	Cables	Poles				
PRADO AVENUE	2.25 N	2.70 N	3.20 N	1.65 S	1.78 N	2.5 S	1.20 BOK	4.25N-0.5S	16.00	6SW, FTTHS	LEVEL 1
CARD CIRCUIT	2.25 N	2.70 N	3.20 N	1.65 S	1.78 N	2.5 S	1.20 BOK	4.25N-0.5S	16.00	6SW, FTTHS	LEVEL 1
ZISA STREET (EAST-WEST)	2.25 N	2.70 N	3.20 N	1.65 S	1.78 N	2.5 S	1.20 BOK	4.25N-0.5S	16.00	6SW, FTTHS	LEVEL 1
ZISA STREET (NORTH-SOUTH)	2.25W	2.70 W	3.20 W	0.70 E	1.78 W	1.30 E	1.00 BOK	5.10W-2.80E	14.00	6SW, FTTHS	LEVEL 1
TOLEDO LANE							0.60 BOK	0.00W-1.00E	8.00		ACCESS LANE
HUMEDAL STREET							0.60 BOK	0.00W-1.00E	8.00		ACCESS LANE
PACHA WALK	1.65 W	2.30 W	2.75 W	3.25 W	3.25 W	3.75 W	0.60 BOK		4.50	6SW, FTTHS	ACCESS WALK
PAJARO WALK	1.65 W	2.30 W	2.75 W	3.25 W	3.25 W	3.75 W	0.60 BOK		4.50	6SW, FTTHS	ACCESS WALK

NOTE: a) At the court 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 title boundary.
c) * Indicates Communication pits placed within concrete footpath.

SYMBOL LEGEND



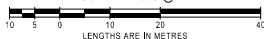
WARNING


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

ATTENTION TO CONTRACTOR

1. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.
2. 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**.
3. 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.

PLAN
SCALE 1:500
SCALE 1:500 @ A1



AMENDMENTS			 <div>breese pitt dixon pty. ltd. land surveyors civil engineers</div>				1/19 calo street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310		
			MELWAY REF. 135-D-5				DELARAY ESTATE STAGE 20		MUNICIPALITY CASEY
	B	22/06/22	PLAN UPDATES	SURVEY	BPD	REFERENCE 8974 ^E /20			
			ISSUED FOR CONSTRUCTION	DESIGN	GL				
	A	04/04/22		DRAWN	GL				
VER	DATE	REMARKS	CHECKED	SCALE AS SHOWN		DATE	MAR'22	SHEET 1 OF 11	B



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 22481
Report No 22481/R001
Date Issued 20/07/2022

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	DELARAY - STAGE 20	Date tested	11/07/22
Location	CLYDE NORTH	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	4	5	-
Location	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 ³	2.07	2.07	2.02	2.05	2.01	-
Field moisture content %	21.4	18.3	18.9	17.4	20.0	-

Test procedure AS 1289.5.7.1

Test No	1	2	3	4	5	-
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 ³	2.08	2.08	2.04	2.06	2.04	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	24.0	20.5	21.5	20.0	22.5	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	2.5% 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})	%	99.0	99.5	99.0	99.5	99.0	-
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Material description

No 1 - 5 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 22481
Report No 22481/R002
Date Issued 05/10/2022

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
Project DELARAY - STAGE 20
Location CLYDE NORTH

Tested by SB
Date tested 29/09/22
Checked by JHF

Feature EARTHWORKS

Layer thickness 200 mm

Time: 12:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	6	7	8	9	10	11
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	2.08	2.07	2.08	2.07	2.06	2.06
Field moisture content %	20.7	19.9	21.2	20.2	21.4	18.9

Test procedure AS 1289.5.7.1

Test No	6	7	8	9	10	11
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	2.12	2.14	2.11	2.12	2.11	2.12
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	23.5	21.5	23.5	22.5	23.5	21.0

Moisture Variation From Optimum Moisture Content	2.5% dry	1.5% dry	2.0% dry	2.0% 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})	%	98.0	97.0	98.5	98.0	97.5	97.0
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Material description

No 6 - 11 Clay Fill

AVRLOT HILF V1.10 MAR 13



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ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry