



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

3rd February 2023

Our Reference: 22476:NB1448

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
UNITY PARK – STAGE 5 (TARNEIT)

Please find attached our Report No's 22476/R001 to 22476/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 was performed in July 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).

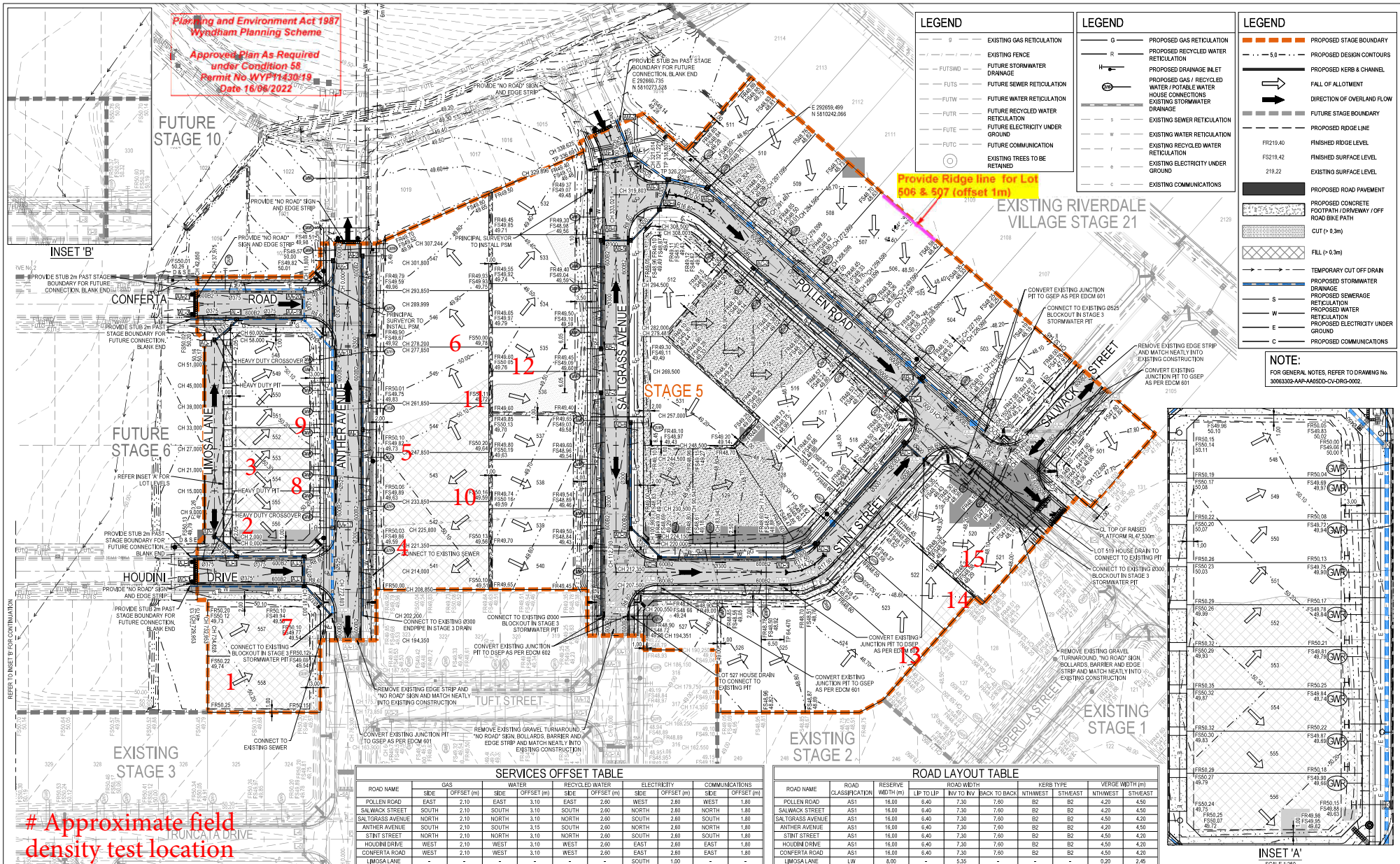
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1



LEGEND

- EXISTING GAS RETICULATION
- EXISTING FENCE
- FUTSMD FUTURE STORMWATER DRAINAGE
- FUTS FUTURE SEWER RETICULATION
- FUTW FUTURE WATER RETICULATION
- FUTR FUTURE RECYCLED WATER RETICULATION
- FUTE FUTURE ELECTRICITY UNDER GROUND
- FUTC FUTURE COMMUNICATION
- EXISTING TREES TO BE RETAINED

LEGEND

- PROPOSED GAS RETICULATION
- PROPOSED RECYCLED WATER RETICULATION
- PROPOSED DRAINAGE INLET
- PROPOSED GAS / RECYCLED WATER / POTABLE WATER HOUSE CONNECTIONS
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER RETICULATION
- EXISTING WATER RETICULATION
- EXISTING RECYCLED WATER RETICULATION
- EXISTING ELECTRICITY UNDER GROUND
- EXISTING COMMUNICATIONS

LEGEND

- PROPOSED STAGE BOUNDARY
- PROPOSED DESIGN CONTOURS
- PROPOSED KERB & CHANNEL
- FALL OF ALLOTMENT
- DIRECTION OF OVERLAND FLOW
- FUTURE STAGE BOUNDARY
- PROPOSED RIDGE LINE
- FR219.40 FINISHED RIDGE LEVEL
- FR219.42 FINISHED SURFACE LEVEL
- 219.22 EXISTING SURFACE LEVEL
- PROPOSED ROAD PAVEMENT
- PROPOSED CONCRETE FOOTPATH / DRIVEWAY / OFF ROAD BIKER PATH
- CUT (> 0.3m)
- FILL (> 0.3m)
- TEMPORARY CUT OFF DRAIN
- PROPOSED STORMWATER DRAINAGE
- PROPOSED SEWERAGE RETICULATION
- PROPOSED WATER RETICULATION
- PROPOSED ELECTRICITY UNDER GROUND
- PROPOSED COMMUNICATIONS

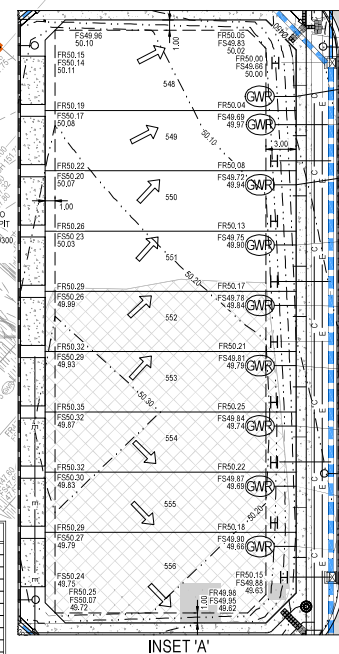
NOTE:
FOR GENERAL NOTES, REFER TO DRAWING No. 30063302-AAP-AA05DD-CV-DRG-0002

SERVICES OFFSET TABLE

ROAD NAME	GAS		WATER		RECYCLED WATER		ELECTRICITY		COMMUNICATIONS	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
POLLEN ROAD	EAST	2.10	EAST	3.10	EAST	2.60	WEST	2.60	WEST	1.80
SALWACK STREET	SOUTH	2.10	SOUTH	3.10	SOUTH	2.60	NORTH	2.60	NORTH	1.80
SALTGRASS AVENUE	NORTH	2.10	NORTH	3.10	SOUTH	2.60	SOUTH	2.60	SOUTH	1.80
ANTHER AVENUE	SOUTH	2.10	SOUTH	3.15	SOUTH	2.60	NORTH	2.60	NORTH	1.80
SINUI STREET	NORTH	2.10	NORTH	3.10	NORTH	2.60	SOUTH	2.60	SOUTH	1.80
HOUDINI DRIVE	WEST	2.10	WEST	3.10	WEST	2.60	EAST	2.60	EAST	1.80
CONFERTA ROAD	WEST	2.10	WEST	3.10	WEST	2.60	EAST	2.60	EAST	1.80
LIMOSALANE							SOUTH	1.00		

ROAD LAYOUT TABLE

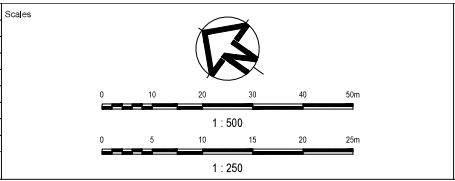
ROAD NAME	ROAD CLASSIFICATION	RESERVE WIDTH (m)	ROAD WIDTH				KERB TYPE			
			LIP TO LIP	LIP TO INV	BACK TO BACK	INTHWEST	SITHEAST	INTHWEST	SITHEAST	
POLLEN ROAD	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
SALWACK STREET	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
SALTGRASS AVENUE	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
ANTHER AVENUE	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
SINUI STREET	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
HOUDINI DRIVE	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
CONFERTA ROAD	AS1	16.00	6.40	7.30	7.60	B2	B2	B2	4.20	4.50
LIMOSALANE	LW	8.00			5.35				0.20	2.45



Approximate field density test location

Issue Log

Issue	Description	DR	CH	VE	Date
04	UPDATED LOT 506+511 EXISTING LEVELS	HP	EW	SE	14/08/22
03	AMENDED AS PER COUNCIL COMMENTS	HP	EW	SE	16/05/22
02	AMENDED AS PER COUNCIL COMMENTS	HP	NM	SE	24/03/22
01	ISSUED TO COUNCIL FOR APPROVAL	HP	NM	SE	31/01/22



Client

HB Land
A member of Ho Bee Land

Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures

Drawn	H.PALOMANQUE	Original Size	A1
Designed	S.HARMANIS	Height Datum	AHD
Project Manager	S.EISEL	Grid	MGA
Verified			

Project: UNITY PARK STAGE 5 WYNDHAM CITY COUNCIL

File: ROADWORKS AND DRAINAGE LAYOUT PLAN

ARCADIS

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378-380 Collins Street
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Project No: 30063302-AAP-AA05DD-CV-DRG-0220-Roadworks.dwg

30063302-AAP-AA05DD-CV-DRG-0220-04



COMPACTION ASSESSMENT

Job No 22476
 Report No 22476/R001
 Date Issued 14/07/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	UNITY PARK - STAGE 5	Date tested	06/07/22
Location	TARNEIT	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	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	
Field wet density	t/m ³	1.86	1.86	1.85	1.86	1.82	1.85
Field moisture content	%	27.0	22.2	29.0	28.2	24.9	29.8

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	1.89	1.91	1.88	1.87	1.83	1.89
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	29.0	25.0	31.0	30.5	27.5	32.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	1.5% dry	2.0% dry	2.5% dry	2.5% 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	97.5	98.5	100.0	99.5	98.0
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Material description

No 1 - 6 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

Job No 22476
 Report No 22476/R002
 Date Issued 14/07/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	UNITY PARK - STAGE 5	Date tested	07/07/22
Location	TARNEIT	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:00
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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	1.79	1.86	1.87	-	-	-
Field moisture content %	28.4	31.3	29.3	-	-	-

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	1.83	1.90	1.89	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	31.0	34.0	32.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% 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}) %	97.5	98.5	99.0	-	-	-
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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



COMPACTION ASSESSMENT

Job No 22476
 Report No 22476/R003
 Date Issued 14/07/2022

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	JB
Project	UNITY PARK - STAGE 5	Date tested	08/07/22
Location	TARNEIT	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	10	11	12	13	14	15	
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	
Field wet density	t/m ³	1.84	1.84	1.83	1.81	1.86	1.83
Field moisture content	%	24.9	25.4	26.1	27.2	24.3	25.2

Test procedure AS 1289.5.7.1

Test No	10	11	12	13	14	15	
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	1.89	1.89	1.84	1.90	1.90	1.88
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	27.0	28.0	29.0	29.0	26.0	27.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	1.5% dry	2.5% 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})	%	97.0	97.5	99.0	95.5	98.0	97.5
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Material description

No 10 - 15 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