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

12th June 2024

Our Reference: 24182:NB1879

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
WOODSONG – STAGE 3 (MICKLEHAM)

Please find attached our Report No's 24182/R001 to 24182/R008 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 April 2024 and was completed in May 2024.

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).

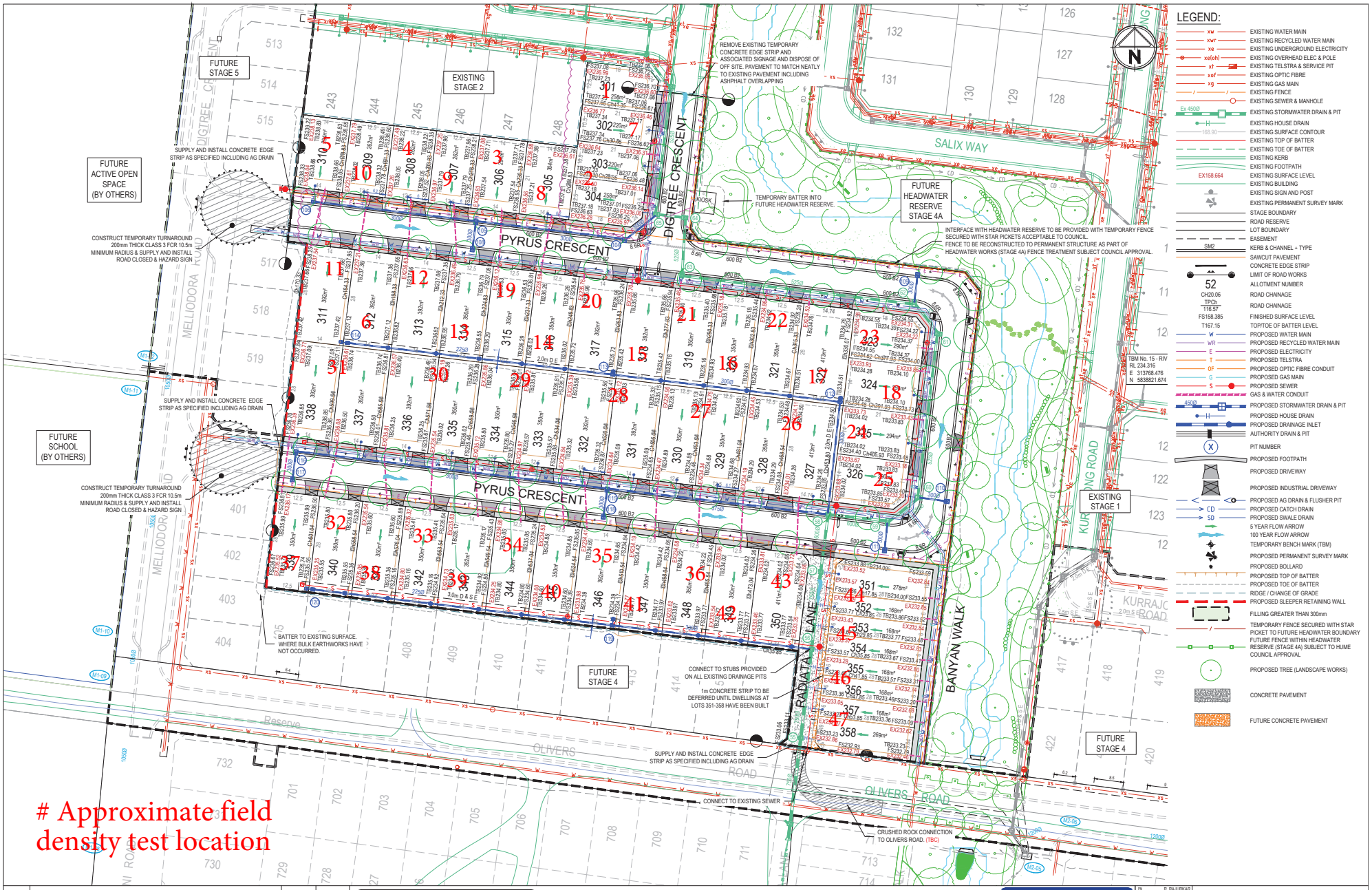
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



LEGEND:

- EXISTING WATER MAIN
- EXISTING RECYCLED WATER MAIN
- EXISTING UNDERGROUND ELECTRICITY
- EXISTING OVERHEAD ELEC & POLE
- EXISTING TELSTRA & SERVICE PIT
- EXISTING OPTIC FIBRE
- EXISTING GAS MAIN
- EXISTING FENCE
- EXISTING SEWER & MANHOLE
- EXISTING STORMWATER DRAIN & PIT
- EXISTING HOUSE DRAIN
- EXISTING SURFACE CONTOUR
- EXISTING TOP OF BATTER
- EXISTING TOE OF BATTER
- EXISTING KERB
- EXISTING FOOTPATH
- EXISTING SURFACE LEVEL
- EXISTING BUILDING
- EXISTING SIGN AND POST
- EXISTING PERMANENT SURVEY MARK
- STAGE BOUNDARY
- ROAD RESERVE
- LOT BOUNDARY
- EASEMENT
- KERB & CHANNEL + TYPE
- SAWCUT PAVEMENT
- CONCRETE EDGE STRIP
- LIMIT OF ROAD WORKS
- ALLOTMENT NUMBER
- ROAD CHAINAGE
- ROAD CHAINAGE
- FINISHED SURFACE LEVEL
- TOP/TOE OF BATTER LEVEL
- PROPOSED WATER MAIN
- PROPOSED RECYCLED WATER MAIN
- PROPOSED ELECTRICITY
- PROPOSED TELSTRA
- PROPOSED OPTIC FIBRE CONDUIT
- PROPOSED GAS MAIN
- PROPOSED SEWER
- GAS & WATER CONDUIT
- PROPOSED STORMWATER DRAIN & PIT
- PROPOSED HOUSE DRAIN
- PROPOSED DRAINAGE INLET
- AUTHORITY DRAIN & PIT
- PIT NUMBER
- PROPOSED FOOTPATH
- PROPOSED DRIVEWAY
- PROPOSED INDUSTRIAL DRIVEWAY
- PROPOSED AG DRAIN & FLUSHER PIT
- PROPOSED CATCH DRAIN
- PROPOSED SWALE DRAIN
- 5 YEAR FLOW ARROW
- 100 YEAR FLOW ARROW
- TEMPORARY BENCH MARK (TBM)
- PROPOSED PERMANENT SURVEY MARK
- PROPOSED BOLLARD
- PROPOSED TOP OF BATTER
- PROPOSED TOE OF BATTER
- RIDGE / CHANGE OF GRADE
- PROPOSED SLEEPER RETAINING WALL
- FILLING GREATER THAN 300mm
- TEMPORARY FENCE SECURED WITH STAR PICKET TO FUTURE HEADWATER BOUNDARY
- FUTURE FENCE WITHIN HEADWATER RESERVE (STAGE 4A) SUBJECT TO HUME COUNCIL APPROVAL
- PROPOSED TREE (LANDSCAPE WORKS)
- CONCRETE PAVEMENT
- FUTURE CONCRETE PAVEMENT

REV.	AMENDMENTS	APP'D	DATE
2	GENERAL AMENDMENTS	D. WORLAND	12.03.2024
1	GENERAL AMENDMENTS	D. WORLAND	20.02.2024
0	ISSUED FOR CONSTRUCTION	D. WORLAND	31.01.2024

WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

PM	R. RAJURKAR
DESIGNED	12.10.2023 N. KEOGH
CHECKED	12.10.2023 D. WORLAND
AUTHORISED	12.10.2023 R. RAJURKAR
MEL/WAYS	386 A4
POS No.	PS906551L
STATUS	CONSTRUCTION

WOODSONG ESTATE
STAGE 3
HUME CITY COUNCIL
DETAIL PLAN - 1

151000-03RD04 | SHEET No. 4 OF 22 | REV. 2

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R001
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	15/04/24
Location	MICKLEHAM	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	13:35

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/m³*	2.12	2.13	2.09	2.10	2.10	2.03
Field moisture content	*%*	16.7	16.8	18.0	16.9	17.6	17.6

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*	2.14	2.15	2.10	2.11	2.10	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.0	18.5	20.0	17.0	19.5	18.0

Moisture Variation From Optimum Moisture Content		2.5% dry	2.0% dry	2.0% dry	0.0%	2.0% dry	0.0%

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**	**99.0**	**99.5**	**99.5**	**99.5**	**99.0**

Material description

No 1 - 6 Clay Fill

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	24182
		Report No	24182/R002
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	16/04/24
Location	MICKLEHAM	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	14:28

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/m³*	2.11	2.10	2.09	2.07	2.02	1.99
Field moisture content	*%*	16.7	16.9	17.9	16.6	17.8	17.9

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/m³*	2.15	2.12	2.10	2.07	2.04	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	17.0	17.0	17.0	19.0	20.5	20.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.5% wet	2.0% dry	2.5% dry	2.5% dry

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})	*%*	**98.5**	**99.0**	**99.5**	**100.0**	**99.0**	**97.5**

Material description

No 7 - 12 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R003
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	WOODSONG - STAGE 3	Date tested	22/04/24
Location	MICKLEHAM	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	13:28

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/m³	1.97	1.98	2.11	2.04	2.08	2.12
Field moisture content	%	19.2	19.9	18.7	19.8	20.4	20.5

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/m³	2.01	2.02	2.15	2.08	2.10	2.12
Adjusted Peak Converted Wet Density	t/m³	-	-	-	-	-	-
Optimum Moisture Content	%	22.0	20.0	20.5	19.5	22.5	22.0

Moisture Variation From Optimum Moisture Content	2.5% dry	0.0%	2.0% dry	0.5% wet	2.0% dry	1.5% dry

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**	**98.0**	**98.0**	**98.0**	**99.0**	**99.5**

Material description

No 13 - 18 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R004
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	23/04/24
Location	MICKLEHAM	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	11:33

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**19**	**20**	**21**	**22**	**23**	**24**
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/m³*	1.96	1.92	1.95	1.93	1.94	1.96
Field moisture content	*%*	20.4	18.4	19.0	17.5	19.5	17.9

Test procedure AS 1289.5.7.1

Test No		19	20	21	22	23	24
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*	2.01	1.90	1.97	1.90	1.93	2.01
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.5	20.0	19.5	19.5	22.0	18.0

Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	0.5% dry	2.0% dry	2.5% dry	0.0%

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**	**101.0**	**99.5**	**101.5**	**100.5**	**97.5**

Material description

No 19 - 24 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R005
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	24/04/24
Location	MICKLEHAM	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:57

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**25**	**26**	**27**	**28**	**29**	**30**
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/m³*	1.94	1.92	1.91	1.94	1.95	1.97
Field moisture content	*%*	18.1	18.4	17.9	17.8	19.4	18.6

Test procedure AS 1289.5.7.1

Test No		25	26	27	28	29	30
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*	1.96	1.91	1.90	1.97	1.96	2.01
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	20.5	20.5	18.0	21.5	21.0

Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	2.5% dry	0.0%	2.0% dry	2.0% dry

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**	**100.5**	**100.5**	**98.5**	**99.5**	**98.0**

Material description

No 25 - 30 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R006
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	29/04/24
Location	MICKLEHAM	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	11:58

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**31**	**32**	**33**	**34**	**35**	**36**
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/m³*	1.90	1.92	1.95	1.95	1.93	1.94
Field moisture content	*%*	17.6	18.4	17.2	19.8	19.2	18.0

Test procedure AS 1289.5.7.1

Test No		31	32	33	34	35	36
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*	1.91	1.91	1.99	2.00	1.98	1.98
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.0	18.5	19.5	19.0	21.5	17.5

Moisture Variation From Optimum Moisture Content	1.0% dry	0.0%	2.0% dry	0.5% wet	2.0% dry	0.5% wet

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})	*%*	**100.0**	**100.5**	**98.0**	**97.5**	**97.5**	**98.0**

Material description

No 31 - 36 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R007
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	30/04/24
Location	MICKLEHAM	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:58

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**37**	**38**	**39**	**40**	**41**	**42**
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/m³*	1.92	1.95	1.95	1.93	1.90	1.89
Field moisture content	*%*	22.9	23.8	21.3	21.7	19.1	19.4

Test procedure AS 1289.5.7.1

Test No		37	38	39	40	41	42
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*	1.96	2.03	2.01	2.00	1.91	1.92
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	25.5	25.0	23.5	21.5	21.0	21.5

Moisture Variation From Optimum Moisture Content		2.5% dry	1.0% dry	2.0% dry	0.0%	2.0% dry	2.0% dry

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**	**96.5**	**97.0**	**96.5**	**99.5**	**98.5**

Material description

No 37 - 42 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24182
		Report No	24182/R008
		Date Issued	12/06/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	WOODSONG - STAGE 3	*Date tested*	01/05/24
Location	MICKLEHAM	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	12:01

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**43**	**44**	**45**	**46**	**47**	**-**
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/m³*	1.93	1.90	1.92	1.94	1.95	-
Field moisture content	*%*	26.6	23.5	23.9	21.5	21.4	-

Test procedure AS 1289.5.7.1

Test No		43	44	45	46	47	-
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/m³*	1.97	1.89	1.94	2.01	2.01	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	29.5	26.0	26.0	24.0	23.5	-

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

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**	**100.0**	**99.0**	**96.5**	**97.0**	**-**

Material description

No 43 - 47 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