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

26th April 2022

Our Reference: 21741:NB1227

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ALAMORA – STAGE 9 (TARNEIT)

Please find attached our Report No's 21741/R001 to 21741/R007 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 2021 and was completed in November 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).

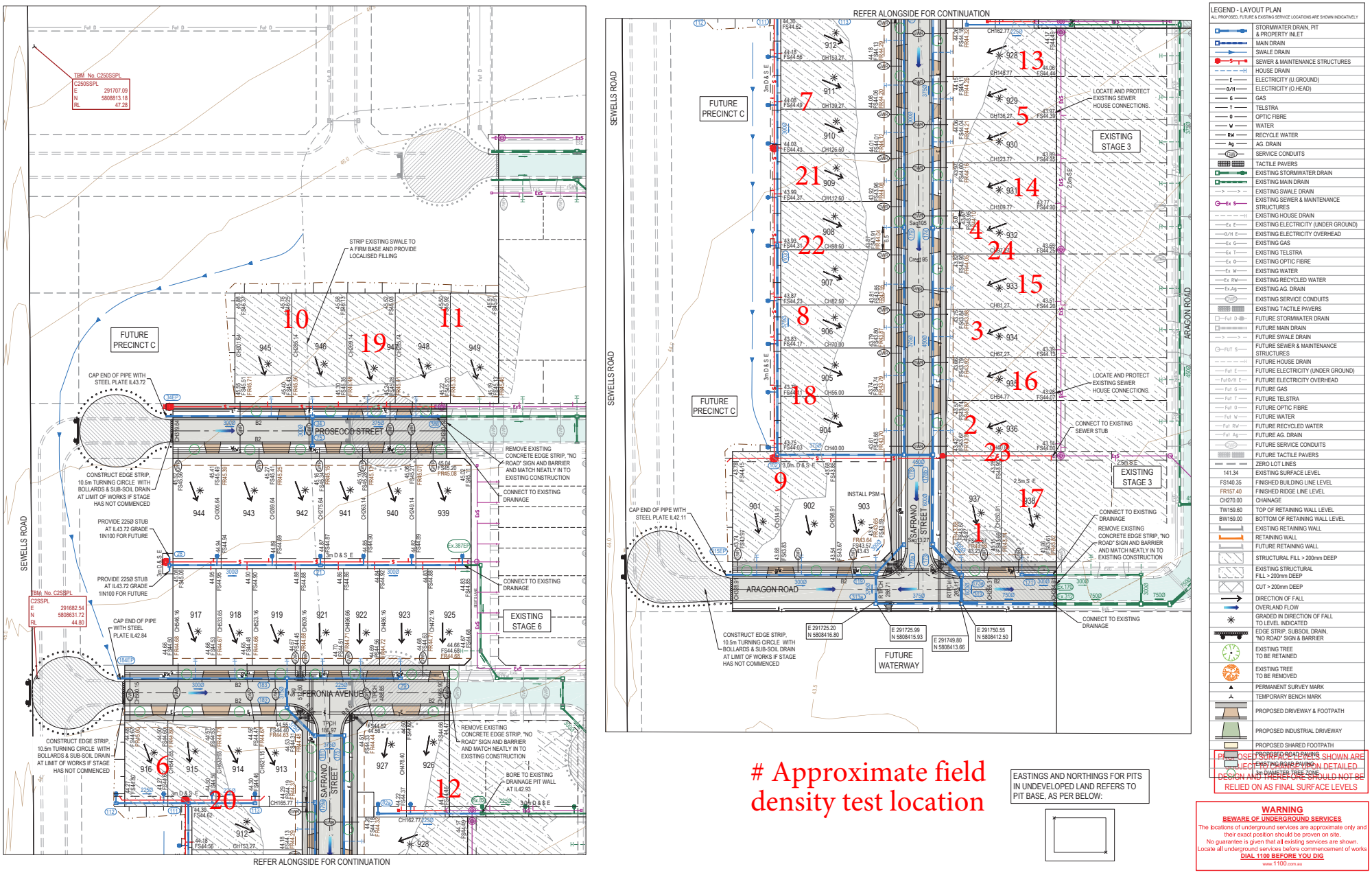
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



Approximate field density test location

EASTINGS AND NORTHINGS FOR PITS IN UNDEVELOPED LAND REFERS TO PIT BASE, AS PER BELOW:

LEGEND - LAYOUT PLAN
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

- STORMWATER DRAIN, PIT & PROPERTY INLET
- MAIN DRAIN
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- ELECTRICITY (U.GROUND)
- ELECTRICITY (O.HEAD)
- GAS
- TELSTRA
- OPTIC FIBRE
- WATER
- RECYCLE WATER
- AG. DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS
- EXISTING STORMWATER DRAIN
- EXISTING MAIN DRAIN
- EXISTING SWALE DRAIN
- EXISTING SEWER & MAINTENANCE STRUCTURES
- EXISTING HOUSE DRAIN
- EXISTING ELECTRICITY (UNDER GROUND)
- EXISTING ELECTRICITY OVERHEAD
- EXISTING GAS
- EXISTING TELSTRA
- EXISTING OPTIC FIBRE
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING AG. DRAIN
- EXISTING SERVICE CONDUITS
- EXISTING TACTILE PAVERS
- FUTURE STORMWATER DRAIN
- FUTURE MAIN DRAIN
- FUTURE SWALE DRAIN
- FUTURE SEWER & MAINTENANCE STRUCTURES
- FUTURE HOUSE DRAIN
- FUTURE ELECTRICITY (UNDER GROUND)
- FUTURE ELECTRICITY OVERHEAD
- FUTURE GAS
- FUTURE TELSTRA
- FUTURE OPTIC FIBRE
- FUTURE WATER
- FUTURE RECYCLED WATER
- FUTURE AG. DRAIN
- FUTURE SERVICE CONDUITS
- FUTURE TACTILE PAVERS
- ZERO LOT LINES
- 141.34 EXISTING SURFACE LEVEL
- FS140.35 FINISHED BUILDING LINE LEVEL
- FR157.40 FINISHED RIDGE LINE LEVEL
- CH270.00 CHAINAGE
- TW159.60 TOP OF RETAINING WALL LEVEL
- BW159.00 BOTTOM OF RETAINING WALL LEVEL
- EXISTING RETAINING WALL
- RETAINING WALL
- FUTURE RETAINING WALL
- STRUCTURAL FILL > 200mm DEEP
- EXISTING STRUCTURAL FILL > 200mm DEEP
- CUT > 200mm DEEP
- DIRECTION OF FALL
- OVERLAND FLOW
- GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
- EDGE STRIP, SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY & FOOTPATH
- PROPOSED INDUSTRIAL DRIVEWAY
- PROPOSED SHARED FOOTPATH
- PROPOSED ROAD PAVING
- EXISTING ROAD PAVING
- 3m DIAMETER TREE ZONE

PROPOSED FINAL LEVELS SHOWN ARE SUBJECT TO CHANGE UPON DETAILED DESIGN AND THEREFORE SHOULD NOT BE RELIED ON AS FINAL SURFACE LEVELS

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.
Locate all underground services before commencement of works
DIAL 1100 BEFORE YOU DIG
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DRAFTER	DESIGNER	CHECKER	APPROVER
A	30.09.21	ISSUED FOR INFORMATION ONLY	D.MARAMAG	H.EHSANI	C.SEXTON	S.ANTONOPOULO.

PLAN OF SUB. NO. PS841640V/S7
PERMIT REF. NO. WYP10107_17.02

SUBJECT TO APPROVAL

Scale 1:500 (0 5 10 20)
SCALE AS SHOWN AT A1

SMEC
Member of the Surbana Jurong Group
ABN 47 065 475 149
Collins Square, Tower 4, Level 20, 727 Collins St
Melbourne, VIC 3008
Ph 03 9514 1500

ALAMORA Tarneit

Alamora - Stage 9
Wyndham City Council
Road and Drainage
Layout Plan

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
234 D5	2070E-A09-111	02 of 19	A

DWG PATH: V:_Vault\Projects_Urban\2070E-Newgate\2070E-A09\Dwgs\2070E-A09-111.dwg PRINTED BY: DM15995 on 15/10/2021 at 12:41:14 PM

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	21741
		Report No	21741/R001
		Date Issued	13/01/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	28/10/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:03

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**1**	**2**	**3**	**-**	**-**	**-**
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/m³*	1.85	1.81	1.85	-	-	-
Field moisture content	*%*	24.5	25.7	27.8	-	-	-

Test procedure AS 1289.5.7.1

Test No		1	2	3	-	-	-
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/m³*	1.94	1.84	1.93	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	26.0	28.0	30.5	-	-	-

Moisture Variation From Optimum Moisture Content		1.5% 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})	*%*	**95.5**	**98.0**	**96.0**	**-**	**-**	**-**

Material description

No 1 - 3 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	21741
		Report No	21741/R002
		Date Issued	13/01/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	29/10/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 15:34

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**4**	**5**	**6**	**-**	**-**	**-**
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/m³*	1.93	1.79	1.79	-	-	-
Field moisture content	*%*	23.9	29.6	27.6	-	-	-

Test procedure AS 1289.5.7.1

Test No		4	5	6	-	-	-
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/m³*	2.02	1.86	1.87	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	26.5	31.5	30.0	-	-	-

Moisture Variation From Optimum Moisture Content		2.5% dry	1.5% 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})	*%*	**95.5**	**96.0**	**96.0**	**-**	**-**	**-**

Material description

No 4 - 6 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	21741
		Report No	21741/R003
		Date Issued	19/11/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	03/11/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:40

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/m³*	1.80	1.80	1.81	-	-	-
Field moisture content	*%*	22.6	24.0	20.8	-	-	-

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/m³*	1.79	1.78	1.79	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	25.0	26.0	23.5	-	-	-

Moisture Variation From Optimum Moisture Content		2.5% dry	2.0% 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})	*%*	**100.5**	**101.0**	**101.0**	**-**	**-**	**-**

Material description

No 7 - 9 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	21741
		Report No	21741/R004
		Date Issued	13/01/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	04/11/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 15:57

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	175
Field wet density	*t/m³*	1.96	2.04	1.93	1.94	1.80	1.88
Field moisture content	*%*	23.7	25.0	24.1	23.7	23.6	26.4

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	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.00	2.07	1.96	2.05	1.85	1.93
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	26.0	27.5	26.5	25.0	26.5	28.5

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.5% dry	1.0% 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})	*%*	**97.5**	**99.0**	**98.5**	**95.0**	**97.5**	**97.5**

Material description

No 10 - 15 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	21741
		Report No	21741/R005
		Date Issued	19/11/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	05/11/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:50

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**16**	**17**	**18**	**-**	**-**	**-**
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/m³*	1.85	1.80	1.82	-	-	-
Field moisture content	*%*	22.1	22.2	22.4	-	-	-

Test procedure AS 1289.5.7.1

Test No		16	17	18	-	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	-	-	-
Percent of oversize material	*wet*	2	0	0	-	-	-
Peak Converted Wet Density	*t/m³*	1.84	1.83	1.82	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	1.87	-	-	-	-	-
Optimum Moisture Content	*%*	23.5	24.5	25.0	-	-	-

Moisture Variation From Optimum Moisture Content		1.5% 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})	*%*	**99.0**	**98.5**	**100.0**	**-**	**-**	**-**

Material description

No 16 - 18 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	21741
		Report No	21741/R006
		Date Issued	19/11/2021
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	08/11/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:55

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**19**	**20**	**21**	**-**	**-**	**-**
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/m³*	1.82	1.82	1.82	-	-	-
Field moisture content	*%*	22.2	19.8	22.0	-	-	-

Test procedure AS 1289.5.7.1

Test No		19	20	21	-	-	-
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/m³*	1.84	1.85	1.83	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	24.5	22.0	24.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% 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})	*%*	**99.5**	**98.5**	**99.5**	**-**	**-**	**-**

Material description

No 19 - 21 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	21741
		Report No	21741/R007
		Date Issued	13/02/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	ALAMORA - STAGE 9	*Date tested*	09/11/21
Location	TARNEIT	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:37

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**22**	**23**	**24**	**-**	**-**	**-**
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/m³*	1.80	1.89	1.90	-	-	-
Field moisture content	*%*	18.6	23.2	30.1	-	-	-

Test procedure AS 1289.5.7.1

Test No		22	23	24	-	-	-
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/m³*	1.87	1.93	1.96	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	21.5	25.5	32.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% 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})	*%*	**96.5**	**98.0**	**97.0**	**-**	**-**	**-**

Material description

No 22 - 24 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