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

19th May 2023

Our Reference: 22674:NB1559

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CORNERSTONE – STAGE 20 (WYNDHAM VALE)

Please find attached our Report No's 22674/R001 to 22674/R005 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 September 2022 and was completed in October 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).

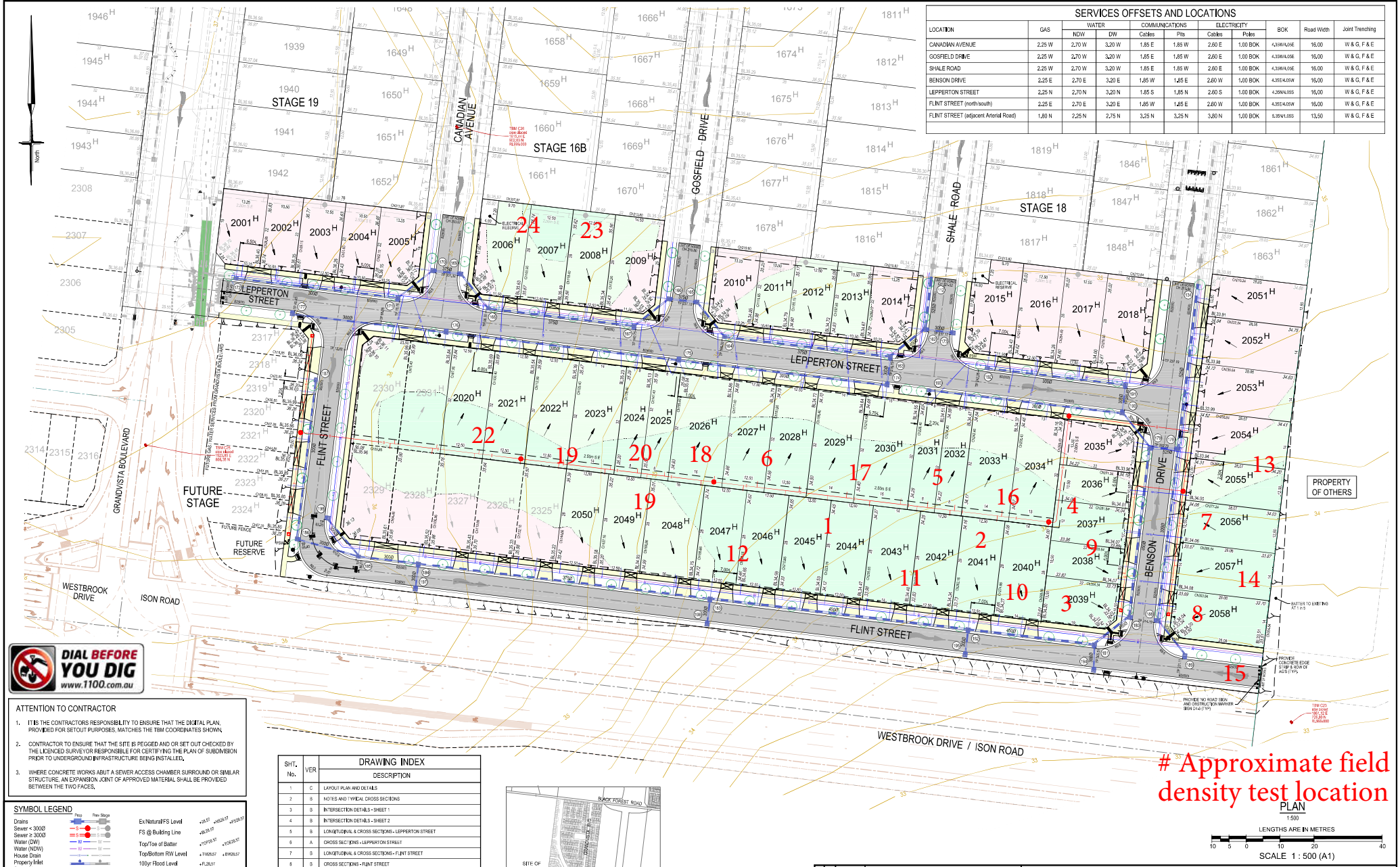
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



SERVICES OFFSETS AND LOCATIONS										
LOCATION	GAS	WATER		COMMUNICATIONS		ELECTRICITY		BOK	Road Width	Joint Trenching
		NDW	DW	Cables	Pits	Cables	Poles			
CANADIAN AVENUE	2.25 W	2.70 W	3.20 W	1.85 E	1.85 W	2.60 E	1.00 BOK	4.35W/4.05E	16.00	W & G, F & E
GOSFIELD DRIVE	2.25 W	2.70 W	3.20 W	1.85 E	1.85 W	2.60 E	1.00 BOK	4.35W/4.05E	16.00	W & G, F & E
SHALE ROAD	2.25 W	2.70 W	3.20 W	1.85 E	1.85 W	2.60 E	1.00 BOK	4.35W/4.05E	16.00	W & G, F & E
BENSON DRIVE	2.25 E	2.70 E	3.20 E	1.85 W	1.85 E	2.60 W	1.00 BOK	4.35E/4.05W	16.00	W & G, F & E
LEPPERTON STREET	2.25 N	2.70 N	3.20 N	1.85 S	1.85 N	2.60 S	1.00 BOK	4.35N/4.05S	16.00	W & G, F & E
FLINT STREET (north/south)	2.25 E	2.70 E	3.20 E	1.85 W	1.85 E	2.60 W	1.00 BOK	4.35E/4.05W	16.00	W & G, F & E
FLINT STREET (adjacent Arterial Road)	1.80 N	2.25 N	2.75 N	3.25 N	3.25 N	3.80 N	1.00 BOK	5.35N/1.00S	13.50	W & G, F & E

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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 LICENCED 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.

SYMBOL LEGEND

Drains; Sewer < 300Ø; Sewer ≥ 300Ø; Water (DW); Water (NDW); House Drain; Property Inlet; Street Sign; PSM; Rock Ret Wall; Sleeper Ret Wall; Conduits 50mm; Conduits 100mm; Street Tree without/with Passive Irrigation (Refer Detail); Ex Drains; Ex Water DW/NDW; Ex Sewer/Gas; Ex Elect/Telecomm

Ex/Natural/FS Level; FS @ Building Line; Top/Toe of Batter; Top/Bottom RW Level; 100yr Flood Level; Fill Proposed (<0.3m/≥0.3m); Cut Proposed; Asphalt Surface Prop; Concrete Surface Prop (Paths/Driveways/Slabs); Tree To Be Removed; Tree To Be Retained with Tree Protection Zone (TPZ)

SHT. No.	VER	DRAWING INDEX DESCRIPTION
1	C	LAYOUT PLAN AND DETAILS
2	B	NOTES AND TYPICAL CROSS SECTIONS
3	B	INTERSECTION DETAILS - SHEET 1
4	B	INTERSECTION DETAILS - SHEET 2
5	B	LONGITUDINAL & CROSS SECTIONS - LEPPERTON STREET
6	A	CROSS SECTIONS - LEPPERTON STREET
7	B	LONGITUDINAL & CROSS SECTIONS - FLINT STREET
8	B	CROSS SECTIONS - FLINT STREET
9	A	LONGITUDINAL & CROSS SECTIONS - CANADIAN AVENUE, GOSFIELD DRIVE
10	A	LONGITUDINAL & CROSS SECTIONS - SHALE ROAD
11	B	LONGITUDINAL & CROSS SECTIONS - BENSON DRIVE
12	A	DRAINAGE LONGITUDINAL SECTIONS - SHEET 1
13	B	DRAINAGE LONGITUDINAL SECTIONS - SHEET 2
14	B	DRAINAGE LONGITUDINAL SECTIONS - SHEET 3
15	B	DRAINAGE LONGITUDINAL SECTIONS - SHEET 4
16	B	SIGNAGE & LINEMARKING PLAN
17	C	LOT BENCHING PLAN

LOCALITY PLAN
1:20,000

Approximate field density test location

PLAN
1:500
LENGTHS ARE IN METRES
10 5 0 10 20 40
SCALE 1 : 500 (A1)

AMENDMENTS			
VER	DATE	REMARKS	
C	08/06/22	POS UPDATE (LOTS 2035-2039), ROAD NAME (FLINT STREET)	
B	21/04/22	BATTER TO ADJOINING LANDHOLDING, LOTS 2051-2058	
A	20/04/22	ISSUED FOR CONSTRUCTION	

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF. 204-G-8
SURVEY BPD
DESIGN BPD
DRAWN DG
CHECKED C.HAGEN

CORNERSTONE ESTATE
STAGE 20
LAYOUT PLAN AND DETAILS

SCALE As Shown | DATUM AHD | DATE Mar'22

MUNICIPALITY WYNDHAM
REFERENCE 8890E/20
SHEET 1 OF 17 | C

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	22674
		Report No	22674/R001
		Date Issued	19/05/2023
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	CORNERSTONE - STAGE 20	Date tested	21/09/22
Location	WYNDHAM VALE	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	13:18

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*	1.98	1.98	1.97	-	-	-
Field moisture content	*%*	27.2	24.4	22.1	-	-	-

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*	2.01	2.01	2.00	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	29.5	26.5	24.5	-	-	-

Moisture Variation From Optimum Moisture Content		2.0% dry	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**	**98.5**	**98.5**	**-**	**-**	**-**

Material description

No 1 - 3 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	22674
Report No	22674/R002
Date Issued	29/09/2022

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	CORNERSTONE - STAGE 20	Date tested	27/09/22
Location	WYNDHAM VALE	Checked by	JHF

Feature **EARTHWORKS** | *Layer thickness* 200 mm | *Time:* 11:00

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*	2.03	1.88	1.86	-	-	-
Field moisture content	*%*	21.9	22.2	22.5	-	-	-

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*	2.03	1.94	1.93	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	24.5	22.5	23.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	0.0%	1.0% 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})	*%*	**100.0**	**97.5**	**96.5**	**-**	**-**	**-**

Material description

No 4 - 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	22674
		Report No	22674/R003
		Date Issued	17/10/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	CORNERSTONE - STAGE 20	*Date tested*	28/09/22
Location	WYNDHAM VALE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:18

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*	1.87	1.88	1.80	1.98	2.01	1.91
Field moisture content	*%*	29.1	28.7	30.8	24.9	24.4	27.4

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*	1.91	1.93	1.84	2.02	2.04	1.93
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	31.5	31.0	33.0	27.0	26.5	29.0

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.0% dry	2.0% dry	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**	**97.5**	**98.0**	**98.0**	**98.5**	**98.5**

Material description

No 7 - 12 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	22674
		Report No	22674/R004
		Date Issued	17/10/2022
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	BS
Project	CORNERSTONE - STAGE 20	*Date tested*	29/09/22
Location	WYNDHAM VALE	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:19

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*	1.83	1.80	1.85	1.98	1.95	1.96
Field moisture content	*%*	23.8	22.0	24.6	21.5	25.1	21.5

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*	1.86	1.83	1.89	2.01	1.98	2.01
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	25.0	24.0	26.0	23.5	27.0	23.5

Moisture Variation From Optimum Moisture Content		1.0% dry	2.0% dry	1.5% dry	2.0% dry	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})	*%*	**98.5**	**98.0**	**98.0**	**98.0**	**98.5**	**97.5**

Material description

No 13 - 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	22674
		Report No	22674/R005
		Date Issued	19/05/2023
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	Apu M
Project	CORNERSTONE - STAGE 20	Date tested	03/09/22
Location	WYNDHAM VALE	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	07:30

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	2.07	1.99	1.99	1.96	1.97
Field moisture content	*%*	23.3	22.8	24.1	23.9	23.5	23.4

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*	2.05	2.12	2.06	2.08	2.03	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	25.5	25.0	26.0	26.0	25.5	25.5

Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	2.0% dry	2.0% dry	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})	*%*	**95.5**	**98.0**	**96.5**	**95.5**	**96.5**	**96.5**

Material description

No 19 - 24 Clay Fill

Approved Signatory : Justin Fry