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

9th February 2024

Our Reference: 23694:NB1785

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

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

Please find attached our Report No's 23694/R001 to 23694/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 was performed in November 2023.

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).

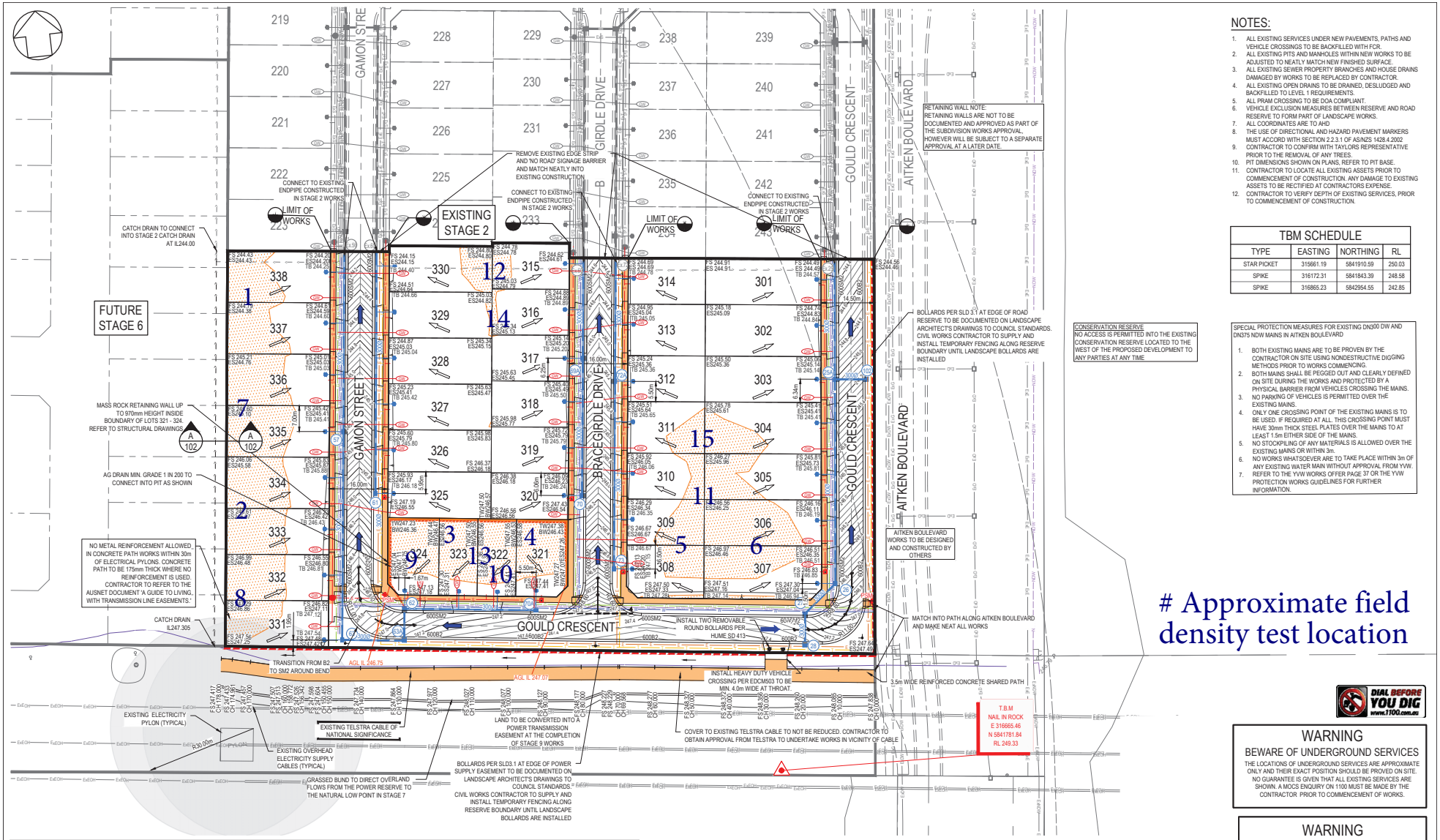
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



NOTES:

1. ALL EXISTING SERVICES UNDER NEW PAVEMENTS, PATHS AND VEHICLE CROSSINGS TO BE BACKFILLED WITH FCR.
2. ALL EXISTING PITS AND MANHOLES WITHIN NEW WORKS TO BE ADJUSTED TO NEATLY MATCH NEW FINISHED SURFACE.
3. ALL EXISTING SEWER PROPERTY BRANCHES AND HOUSE DRAINS DAMAGED BY WORKS TO BE REPLACED BY CONTRACTOR.
4. ALL EXISTING OPEN DRAINS TO BE DRAINED, DESLUDGED AND BACKFILLED TO LEVEL 1 REQUIREMENTS.
5. ALL PRAM CROSSING TO BE DOA COMPLIANT.
6. VEHICLE EXCLUSION MEASURES BETWEEN RESERVE AND ROAD RESERVE TO FORM PART OF LANDSCAPE WORKS.
7. ALL COORDINATES ARE TO AHD
8. THE USE OF DIRECTIONAL AND HAZARD PAVEMENT MARKERS MUST ACCORD WITH SECTION 2.2.3.1 OF AS/NZS 1428.4:2002
9. CONTRACTOR TO CONFIRM WITH TAYLORS REPRESENTATIVE PRIOR TO THE REMOVAL OF ANY TREES.
10. PIT DIMENSIONS SHOWN ON PLANS, REFER TO PIT BASE.
11. CONTRACTOR TO LOCATE ALL EXISTING ASSETS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO EXISTING ASSETS TO BE RECTIFIED AT CONTRACTORS EXPENSE.
12. CONTRACTOR TO VERIFY DEPTH OF EXISTING SERVICES, PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TBM SCHEDULE

TYPE	EASTING	NORTHING	RL
STAR PICKET	315661.19	5841910.59	250.03
SPIKE	316172.31	5841843.39	248.58
SPIKE	316865.23	5842954.55	242.85

SPECIAL PROTECTION MEASURES FOR EXISTING DN300 DW AND DN375 NDW MAINS IN AITKEN BOULEVARD

1. BOTH EXISTING MAINS ARE TO BE PROVEN BY THE CONTRACTOR ON SITE USING NONDESTRUCTIVE DIGGING METHODS PRIOR TO WORKS COMMENCING.
2. BOTH MAINS SHALL BE PEGGED OUT AND CLEARLY DEFINED ON SITE DURING THE WORKS AND PROTECTED BY A PHYSICAL BARRIER FROM VEHICLES CROSSING THE MAINS.
3. NO PARKING OF VEHICLES IS PERMITTED OVER THE EXISTING MAINS.
4. ONLY ONE CROSSING POINT OF THE EXISTING MAINS IS TO BE USED. IF REQUIRED AT ALL. THIS CROSSING POINT MUST HAVE 30mm THICK STEEL PLATES OVER THE MAINS TO AT LEAST 1.5m EITHER SIDE OF THE MAINS.
5. NO STOCKPILING OF ANY MATERIALS IS ALLOWED OVER THE EXISTING MAINS OR WITHIN 3m.
6. NO WORKS WHATSOEVER ARE TO TAKE PLACE WITHIN 3m OF ANY EXISTING WATER MAIN WITHOUT APPROVAL FROM YVW.
7. REFER TO THE YVW WORKS OFFER PAGE 37 OR THE YVW PROTECTION WORKS GUIDELINES FOR FURTHER INFORMATION.

Approximate field density test location

SERVICE OFFSET TABLE

STREET	GAS		RECYCLED WATER (NDW)		POTABLE WATER (DW)		TELECOMS		ELECTRICAL CABLES		SEWER	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET
GAMON STREET	WEST	2.10m	WEST	2.60m	WEST	3.10m	EAST	1.775m	EAST	2.60m	EAST / WEST	1.00m
GOULD CRESCENT (LOTS 301 - 307)	WEST	2.10m	WEST	2.60m	WEST	3.10m	EAST	1.00m	EAST	1.85m	WEST	1.00m
GOULD CRESCENT (LOTS 307 - 324)	NORTH	2.10m	NORTH	2.60m	NORTH	3.10m	SOUTH	1.00m	SOUTH	1.85m	NORTH	1.00m
BRACEGIRDLE DRIVE	WEST	2.10m	WEST	2.60m	WEST	3.10m	EAST	1.775m	EAST	2.60m	EAST / WEST	1.00m

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVED ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. A MOCS ENQUIRY ON 1100 MUST BE MADE BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS.

WARNING
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SETOUT INFORMATION PROVIDED ON THIS PLAN WITH THE DESIGN INTENT WHICH INCLUDES, BUT IS NOT LIMITED TO ITEMS SUCH AS LENGTHS, CO-ORDINATES, SETOUT DIMENSIONS AND PEGGED TITLES BY THE PRINCIPAL'S LICENSED SURVEYOR.

CONTRACTOR

0 5 10 20 30 40
SCALE 1:500 AT A1 SIZE
SCALE 1:1000 AT A3 SIZE

CONSTRUCTION
ISSUED FOR CONSTRUCTION

VER	DATE	REVISION	APPD.
0	07/08/2023	ISSUED FOR CONSTRUCTION	SJP

LEGEND: EXISTING GAS MAIN; EXISTING WATER MAIN; EXISTING ELECTRICITY CABLE; EXISTING TELCO CABLE & PIT; EXISTING SEWER MAIN & M.H.; EXISTING DRAIN & PIT; PROPOSED GAS & WATER CONDUIT; PROPOSED FOOTPATH; PROPOSED GAS MAIN; PROPOSED WATER MAIN; PROPOSED ELECTRICITY CABLE; PROPOSED TELCO CABLE; PROPOSED SEWER MAIN & M.H.; PROPOSED DRAIN, PIT & PROPERTY NUES; STREET NAME SIGN; FILLING ON LOTS DEEPER THAN 200mm; TGSI (TACTILE GROUND SURFACE INDICATORS); EXISTING SURFACE LEVEL; FINISHED SURFACE LEVEL; FINISHED SURFACE BATTER; TOP OF WALL FINISHED SURFACE LEVEL; BOTTOM OF WALL FINISHED SURFACE LEVEL

Coords: MGA Levels: AHD

TAYLORS
Urban Development | Infrastructure
8 / 270 Ferntree Gully Road, Notting Hill, Victoria, 3168
Tel: 61 3 9501 2800 | Web: taylorsdcs.com.au

DESIGNED:	SJP	REG. ENGINEER:	J.YALDEN	DRAFTED:	PGV
CHECKED:	ROK	PE REG. No:	0003270	CAD REF:	01091-03-E-106

HUME CITY COUNCIL
225 DONNYBROOK ROAD, MICKLEHAM
MERRIFIELD RESIDENTIAL, STAGE 3
DETAIL LAYOUT PLAN
SERVICE OFFSET TABLE

SCALE 1:500 @A1
VERSION 0
SHEET 7 OF 26
DRAWING No. 01091-03-E-106

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	23694
		Report No	23694/R001
		Date Issued	20/11/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	MERRIFIELD RESIDENTIAL - STAGE 3	Date tested	09/11/23
Location	MICKLEHAM	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	07:31

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*	1.95	1.92	1.93	1.96	1.92	1.91
Field moisture content	*%*	18.6	18.7	16.3	17.1	20.1	17.5

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*	1.96	1.94	1.96	1.95	1.94	1.92
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.5	20.0	16.5	17.5	21.0	18.5

Moisture Variation From Optimum Moisture Content	2.0% dry	1.5% dry	0.0%	0.5% dry	1.0% dry	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})	*%*	**99.5**	**99.0**	**98.5**	**100.0**	**99.0**	**99.5**

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	23694
		Report No	23694/R002
		Date Issued	20/11/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	MERRIFIELD RESIDENTIAL - STAGE 3	Date tested	10/11/23
Location	MICKLEHAM	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	08:30

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*	1.95	1.92	1.97	1.98	1.97	1.98
Field moisture content	*%*	19.0	19.1	17.6	19.3	19.8	21.1

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*	1.97	1.94	1.99	1.99	2.00	1.99
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	21.0	19.0	18.0	21.0	20.0	22.0

Moisture Variation From Optimum Moisture Content		2.0% dry	0.0%	0.5% dry	1.5% 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})	*%*	**99.0**	**99.0**	**99.0**	**99.5**	**99.0**	**100.0**

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	23694
		Report No	23694/R003
		Date Issued	20/11/23
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	MERRIFIELD RESIDENTIAL - STAGE 3	*Date tested*	13/11/23
Location	MICKLEHAM	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 09:29

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**13**	**14**	**15**	**-**	**-**	**-**
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*	1.94	1.92	1.97	-	-	-
Field moisture content	*%*	18.2	20.7	20.5	-	-	-

Test procedure AS 1289.5.7.1

Test No		13	14	15	-	-	-
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*	1.96	1.91	1.99	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.5	20.5	21.0	-	-	-

Moisture Variation From Optimum Moisture Content		1.5% dry	0.0%	0.5% 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**	**100.5**	**99.0**	**-**	**-**	**-**

Material description

No 13 - 15 Clay Fill

NATA Accredited Laboratory No 9909
Accredited for compliance with
ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry