

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

10<sup>th</sup> February 2022

Our Reference: 21522:NB1150

Winslow Constructors Pty Ltd 50 Barry Road CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

#### RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING NEWBRIDGE – STAGE 6 (WALLAN)

Please find attached our Report No's 21522/R001 to 21522/R010 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 August 2021 and was completed in September 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).

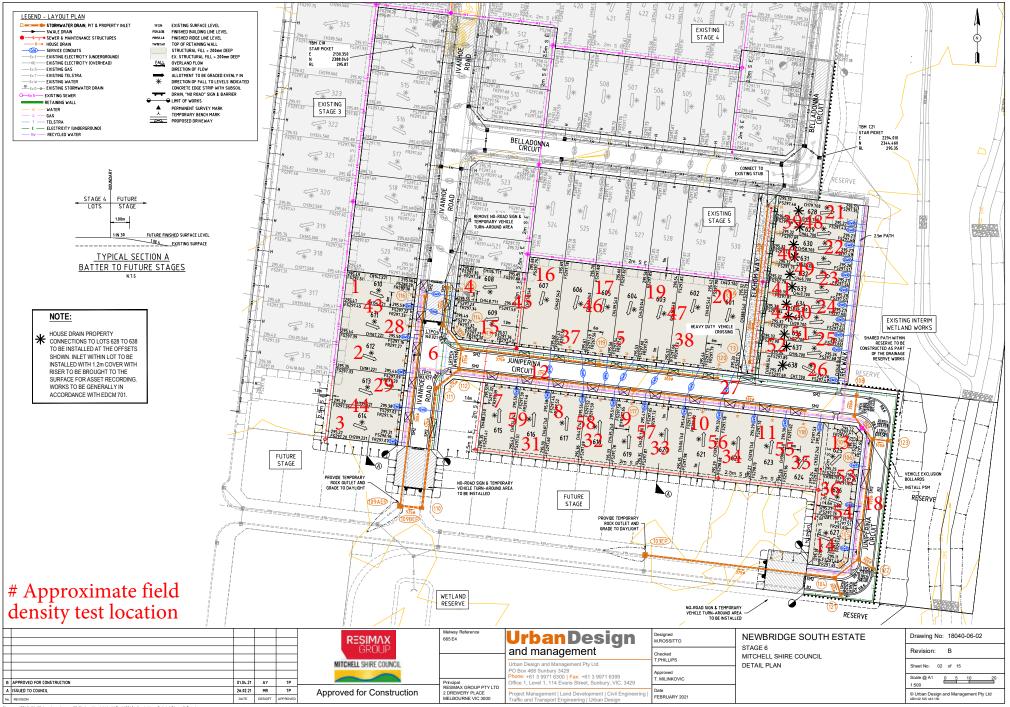
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

# FIGURE 1



file name 18040-06-02.dwg layout name 02 file location L:\Work\Eng\18040 Newbridge Estate\Stage 6\Drawings



8 Rose Avenue, Croydon 31					Re Da	b No eport No ate Issued	21522 21522/R00 <sup>2</sup> 23/09/2021
	V CONSTRUCTORS DGE - STAGE 6	PTY LTD (CA	MPBELLFIE	ED)	Da	sted by hte tested hecked by	AC 17/08/21 JHF
Feature EARTHWO	ORKS	Lay	er thickness	200	mm	Time:	07:31
Test procedure AS 128	9.2.1.1 & 5.8.1						
Test No		1	2	3	4	5	6
Location		REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate depth below							
Measurement depth	mm	175	175	175	175	175	175
Field wet density Field moisture content	<u>t/m³</u> %	1.97 22.1	1.98 22.5	1.97 23.5	1.98 20.9	1.97 19.2	1.98 22.0
Test procedure AS 1289 Test No Compactive effort	9.5.7.1	1	2	3 Stan	4 dard	5	6
Oversize rock retained on	sieve mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize mater		0	0	0	0	0	0
	sity t/m³	1.99	1.99	1.99	2.01	1.97	1.98
Peak Converted Wet Den		-	-	-	-	-	-
Peak Converted Wet Den Adjusted Peak Converted Optimum Moisture Conter	Wet Density t/m <sup>3</sup>	- 19.5	20.0	21.5	19.0	- 17.5	- 19.5
Peak Converted Wet Den Adjusted Peak Converted	Wet Density t/m³ nt %	- 19.5 2.5%	20.0	21.5	19.0 2.0%	- 17.5 1.5%	- 19.5 2.5%
Peak Converted Wet Dens Adjusted Peak Converted Optimum Moisture Conter	Net Density t/m³ nt %						

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

Approved Signatory : Justin Fry



8 Rose Avenue, Croydor						Re Da	b No eport No ate Issued	21522 21522/R002 23/09/2021
	OW CONSTRUCTO RIDGE - STAGE 6 AN	RS F	PTY LTD (CA	AMPBELLFIE	LD)	Da	ested by ate tested necked by	AC 18/08/21 JHF
Feature EARTH	IWORKS		Lay	er thickness	200	mm	Time:	08:33
Test procedure AS 1	289.2.1.1 & 5.8.1							
Test No			7	8	9	10	11	12
Location			REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate depth bel	low FSL							
Measurement depth		nm	175	175	175	175	175	175
Field wet density Field moisture content		/m³ %	2.00 18.2	2.12 18.5	2.09 20.7	2.07 21.0	2.10 20.1	2.05 20.7
Test procedure AS 1 Test No	209.0.7.1		7	8	9 Stan	10 dard	11	12
		nm	40.0	19.0	19.0	19.0	19.0	19.0
Compactive effort	on sieve n		190					
Compactive effort Oversize rock retained			<u>19.0</u> 0			0	0	
Compactive effort Oversize rock retained Percent of oversize ma	aterial v	vet	0	0	0	0 2.11	0 2.12	0
Compactive effort Oversize rock retained Percent of oversize ma Peak Converted Wet D	aterial v Density t/					0 2.11 -	0 2.12 -	
Compactive effort Oversize rock retained Percent of oversize ma Peak Converted Wet D Adjusted Peak Conver	aterial v Density tr ted Wet Density tr	vet ⁄m³	0	0	0			0
	aterial v Density tr ted Wet Density tr ntent	vet ⁄m³ ⁄m³	0 2.03 -	0 2.18 -	0 2.14 -	2.11	2.12	0 2.09 -
Compactive effort Oversize rock retained Percent of oversize ma Peak Converted Wet E Adjusted Peak Conver Optimum Moisture Cor	aterial v Density tr ted Wet Density tr ntent ation From	vet ⁄m³ ⁄m³	0 2.03 - 19.0	0 2.18 - 18.0	0 2.14 - 20.5	2.11 - 22.5	2.12 - 20.5	0 2.09 - 21.0

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	NICAL SERVICES Croydon 3136 WINSLOW CONSTRU(					Re Da	b No eport No ate Issued	21522 21522/R00 23/09/2021
Project NEWBRIDGE - STAGE 6 Location WALLAN		PTY LID (CA	AMPBELLFIE	Da	ested by ate tested necked by	AC 20/08/21 JHF		
Feature	EARTHWORKS		Lay	er thickness	200	mm	Time:	07:30
Test procedui	re 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
	epth below FSL							
Measurement o	-	mm	175	175	175	175	175	175
Field wet densi Field moisture (		<u>t/m³</u> %	1.89 21.3	1.85 25.7	1.83 19.7	1.98 21.1	1.89 23.1	1.87 24.5
Test No Compactive eff	re AS 1289.5.7.1 Fort		13	14	15 Stan	16 dard	17	18
Oversize rock r	etained on sieve	тт	19.0	19.0	19.0	19.0	19.0	19.0
Percent of over		wet	0	0	0	0	0	0
Peak Converte		t∕m³	1.93	1.94	1.88	1.96	1.96	1.91
,	Converted Wet Density	t∕m³	-	-	-	-	-	-
Optimum Moist	ture Content	%	19.5	24.0	18.0	21.0	21.0	23.5
Moistu	re Variation From		2.0%	2.0%	2.0%	0.0%	2.0%	0.5%
Optimur	m Moisture Content		wet	wet	wet		wet	wet
opania				95.5	97.5	101.0	96.0	98.0



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Project N Location V	VINSLOW CONSTRUC IEWBRIDGE - STAGE VALLAN					Da	eport No ate Issued	21522/R00 23/09/2021
		6	PTY LTD (CA	MPBELLFIE	LD)	Da	sted by ate tested aecked by	AC 24/08/21 JHF
<i>Feature</i> E	ARTHWORKS		Lay	er thickness	200	mm	Time:	13:59
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				
Approximate dep								
Measurement de	•	mm	175	175	175	175	175	175
Field wet density		<u>t/m³</u> %	2.08 25.0	2.04 25.6	1.88 26.0	1.86 24.9	1.86 27.0	1.89 26.0
Test procedure Test No Compactive effo			19	20	21 Stan	22 dard	23	24
Oversize rock re		mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of overs		wet	0	0	0	0	0	0
Peak Converted		t/m <sup>3</sup>	2.04	2.08	1.95	1.91	1.90	1.95
	Converted Wet Density	t/m³	-	-	-	-	1.50	1.00
Optimum Moistu		%	25.5	26.0	26.0	26.5	28.0	28.5
optimum molotu		70	20.0	20.0	20.0	20.0	20.0	20.0
Moisture	Variation From		0.5%	0.5%	0.0%	1.5%	0.5%	2.0%
	Moisture Content		dry	dry	0.070	dry	dry	dry
Density Ratio (		%	101.5	98.0	96.5	97.5	98.0	96.5

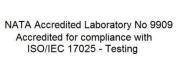


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Project I	WINSLOW CONSTRUC NEWBRIDGE - STAGE					Re Da	b No eport No ate Issued	21522 21522/R00 23/09/2021
	WALLAN		PTY LTD (CA	MPBELLFIE	LD)	Da	sted by ate tested aecked by	AC 30/08/21 JHF
Feature	EARTHWORKS		Lay	er thickness	200	mm	Time:	07:31
Test procedure	ə AS 1289.2.1.1 & 5.8	3. 1						
Test No			25	26	27	28	29	30
Location			REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate de								
Measurement d		mm	175	175	175	175	175	175
Field wet densit Field moisture d		<u>t/m³</u> %	1.91 19.4	1.88 19.0	1.97 18.9	1.88 20.6	1.86 21.4	1.96 21.5
Test No Compactive effo	e AS 1289.5.7.1		25	26	27 Stan	28 dard	29	30
	etained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of overs		wet	0	0	0	0	0	0
Peak Converted	Wet Density	t∕m³	1.95	1.94	1.99	1.94	1.92	1.97
	Converted Wet Density	t∕m³	-	-	-	-	-	-
Optimum Moist	ure Content	%	20.0	19.5	18.5	20.5	21.5	23.0
Moistur	e Variation From		0.5%	0.5%	0.5%	0.0%	0.0%	1.5%
	n Moisture Content		dry	dry	wet			dry
	(R <sub>HD</sub> )	%	98.0	97.0	99.0	97.0	96.5	99.5



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8 Rose Avenue						Re Da	b No eport No ate Issued	21522 21522/R00 23/09/2021
Client Project Location	WINSLOW CONSTRUC NEWBRIDGE - STAGE WALLAN		PTY LTD (CA	AMPBELLFIE	ED)	Da	ested by ate tested necked by	AC 31/08/21 JHF
Feature	EARTHWORKS		Lay	er thickness	200	mm	Time:	08:36
Test procedı	ıre 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				
	lepth below FSL							
Measurement	· ·	mm	175	175	175	175	175	175
Field wet dens Field moisture		t∕m³ %	1.97 18.1	1.97 18.7	1.98 18.7	1.96 18.7	1.97 18.9	1.97 19.7
Test No	ire AS 1289.5.7.1		31	32	33	34	35	36
Compactive et			10.0	10.0	Stan		40.0	40.0
	retained on sieve	mm	19.0 0	19.0	19.0 0	19.0 0	19.0	19.0 0
Percent of ove	ed Wet Density	wet t/m³	2.00	0			0	
	Converted Wet Density	t/m <sup>3</sup>	2.00	2.03	2.01	2.01	2.02	2.00
		<i>v</i> 111 <sup>2</sup> %	17.5	- 18.5	18.0	- 18.5	19.0	18.0
Ontimum Mois		70	17.5	10.5	10.0	10.5	13.0	10.0
Optimum Mois								
	ure Variation From		0.5%	0.0%	0.5%	0.0%	0.0%	2.0%
	ure Variation From Im Moisture Content		0.5% wet	0.0%	0.5% wet	0.0%	0.0%	2.0% wet



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Project NE Location WA Feature EA	NSLOW CONSTRUG WBRIDGE - STAGE ALLAN RTHWORKS AS 1289.2.1.1 & 5.8	6	``````````````````````````````````````	AMPBELLFIE	ELD) 200	Da Ch	te tested	AC 02/09/21 JHF 10:33
Test procedure A <b>Test No</b>			Lay	er thickness	200	mm	Time:	10:33
Test No	AS 1289.2.1.1 & 5.8							
		8.1						
Location			37	38	39	40	41	42
			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 depti								
Measurement dep	th	mm	175	175	175	175	175	175
Field wet density Field moisture con		t/m³ %	1.95 21.7	1.92 23.8	1.92 24.3	1.93 24.2	1.96 21.5	1.94 22.6
Test procedure A Test No Compactive effort	13 1289.5.7.1		37	38	39 Stan	40 dard	41	42
Oversize rock reta	ined on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversiz		wet	0	0	0	0	0	0
Peak Converted V	/et Density	t∕m³	1.95	1.93	1.93	1.97	2.00	2.00
	nverted Wet Density	t∕m³	-	-	-	-	-	-
Optimum Moisture	Content	%	24.0	25.5	27.0	22.0	24.0	20.5
Moisture	/ariation From		2.5%	1.5%	2.5%	2.0%	2.5%	2.5%
	loisture Content		dry	dry	dry	wet	dry	wet
Density Ratio(F	2 <sub>HD</sub> )	%	100.0	99.5	99.5	98.0	98.0	97.5



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Lay 43 REFER TO FIGURE 1 175 1.94 23.8 43 19.0	AMPBELLFIE rer thickness AMPBELLFIE rer thickness A4 REFER TO FIGURE 1 175 1.87 23.8 44	200 <b>45</b> REFER TO FIGURE 1 175 1.93 24.3	Da Ch	AT AT AT AT REFER TO FIGURE 1 175 1.90 23.3 47	AC 03/09/21 JHF 11:32 <b>48</b> REFER TO FIGURE 1 175 1.89 26.5
<b>43</b> REFER TO FIGURE 1 175 1.94 23.8 43 43	<b>44</b> REFER TO FIGURE 1 175 1.87 23.8	<b>45</b> REFER TO FIGURE 1 175 1.93 24.3	<b>46</b> REFER TO FIGURE 1 175 1.92 20.3	<b>47</b> REFER TO FIGURE 1 175 1.90 23.3	<b>48</b> REFER TO FIGURE 1 175 1.89 26.5
REFER TO FIGURE 1 175 1.94 23.8 43 19.0	REFER TO FIGURE 1 175 1.87 23.8 44	REFER TO FIGURE 1 175 1.93 24.3	REFER TO FIGURE 1 175 1.92 20.3	REFER TO FIGURE 1 175 1.90 23.3	REFER TO FIGURE 1 175 1.89 26.5
REFER TO FIGURE 1 175 1.94 23.8 43 19.0	REFER TO FIGURE 1 175 1.87 23.8 44	REFER TO FIGURE 1 175 1.93 24.3	REFER TO FIGURE 1 175 1.92 20.3	REFER TO FIGURE 1 175 1.90 23.3	REFER TO FIGURE 1 175 1.89 26.5
TO FIGURE 1 175 1.94 23.8 43 19.0	TO FIGURE 1 175 1.87 23.8 44	TO FIGURE 1 175 1.93 24.3 45	TO FIGURE 1 175 1.92 20.3	TO FIGURE 1 175 1.90 23.3	TO FIGURE 1 175 1.89 26.5
1.94 23.8 43 19.0	1.87 23.8 44	1.93 24.3 45	1.92 20.3	1.90 23.3	1.89 26.5
1.94 23.8 43 19.0	1.87 23.8 44	1.93 24.3 45	1.92 20.3	1.90 23.3	1.89 26.5
23.8 43 19.0	23.8 44	24.3 45	20.3	23.3	26.5
43 19.0	44	45			
	1		dard		40
0	19.0	19.0	19.0	19.0	19.0
0	0	0	0	0	0
1.98	1.95	1.96	1.96	1.95	1.90
-	-	-	-	-	-
26.5	25.0	27.0	18.5	22.0	26.5
2.5%	1.0%	2.5%	2.0%	1.5%	0.0%
dry	dry	dry	wet	wet	
98.0	96.0	98.5	98.0	97.5	99.5
	2.5% dry	2.5% 1.0% dry dry	2.5% 1.0% 2.5% dry dry dry	2.5% 1.0% 2.5% 2.0% dry dry dry wet	2.5% 1.0% 2.5% 2.0% 1.5% dry dry dry wet wet

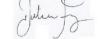
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Project I	Croydon 3136					Re Da	b No eport No ate Issued	21522 21522/R00 25/10/2021
Location	WINSLOW CONSTRUC NEWBRIDGE - STAGE WALLAN		PTY LTD (CA	AMPBELLFIE	ELD)	Da	ested by ate tested necked by	AC 16/09/21 JHF
Feature	EARTHWORKS		Lay	er thickness	200	mm	Time:	07:29
Test procedur	e AS 1289.2.1.1 & 5.8	2.1						
Test No			49	50	51	52	53	54
Location			REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate de								
Measurement d		mm	175	175	175	175	175	175
Field wet densit Field moisture d		<u>t/m³</u> %	1.92 20.5	1.88 21.9	1.89 18.3	1.91 20.4	1.91 16.1	1.92 20.8
Test No Compactive effo	e AS 1289.5.7.1		49	50	51 Stan	52 dard	53	54
Oversize rock re	etained on sieve	тт	19.0	19.0	19.0	19.0	19.0	19.0
Percent of overs	size material	wet	0	0	0	0	0	0
Peak Converted	d Wet Density	t∕m³	1.93	1.92	1.95	1.95	1.97	1.99
	Converted Wet Density	t∕m³	-	-	-	-	-	-
Optimum Moisti	ure Content	%	22.5	23.5	19.0	21.0	17.0	21.0
Moistur	e Variation From		2.0%	1.5%	0.5%	1.0%	0.5%	0.5%
Optimun	n Moisture Content		dry	dry	dry	dry	dry	dry
	(R <sub>HD</sub> )	%	99.5	98.5	96.5	98.0	97.0	96.5







Project NEW Location WAL Feature EAR Test procedure AS Test No	SLOW CONSTRUC VBRIDGE - STAGE LAN THWORKS			AMPBELLFIE	ELD) 200	Da Ch	sted by ate tested becked by Time:	AC 17/09/21 JHF 08:26
Test procedure AS <b>Test No</b>			Lay	er thickness	200	mm	Time:	08:26
Test No	5 1289.2.1.1 & 5.8							
<b>Test No</b> Location		.1						
Location			55	56	57	58	59	-
			REFER TO FIGURE 1					
Approximate depth								
Measurement depth	1	mm	175	175	175	175	175	-
Field wet density Field moisture conte		t/m³ %	1.91 15.9	1.95 15.6	1.98 17.0	1.97 18.5	1.97 16.8	-
Test procedure AS Test No Compactive effort	5 1289.5.7.1		55	56	57 Stan	58 dard	59	-
Oversize rock retain	ed on sieve	mm	19.0	19.0	19.0	19.0	19.0	-
Percent of oversize		wet	0	0	0	0	0	-
Peak Converted We	et Density	t∕m³	1.94	1.97	1.96	1.97	1.98	-
Adjusted Peak Con	verted Wet Density	t∕m³	-	-	-	-	-	-
Optimum Moisture (	Content	%	16.5	16.5	19.5	20.5	18.0	-
Moisture Va	ariation From		0.5%	1.0%	2.5%	2.0%	1.0%	-
Optimum Mo	isture Content		dry	dry	dry	dry	dry	
Density Ratio(R <sub>H</sub>	<sub>ID</sub> )	%	98.0	99.0	101.0	100.0	100.0	-



