

CIVIL GEOTEC	HNICAL SERVICES						Job No Report No Date Issued	19417 19417/R001 21/08/2019
Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Tested by AC						AC.		
Project	OI IVINE - STAGE 54							15/07/19
Location	DONNYBROOK						Checked by	JHF
								••••
Feature	CAPPING		Lav	er thickness	285	mm	Time	11.15
, outuro			249		200			
Test procedu	ure AS 1289.2.1.1 &	5.8.1						
Test No			1	2	3	4	5	6
Location			Gramma	r Avenue		Facu	Ity Avenue	
		Chainage	180	230	140	190	240	290
		Offset	1.8	1.8	1.8	1.8	1.8	1.8
			east	west	east	west	south	north
			of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
Approximate	depth below FSL							
Measurement	t depth	тт	275	275	275	275	275	275
Field wet den	sity	t/m³	2.18	2.17	2.19	2.17	2.15	2.16
Field moisture	e content	%	10.2	10.0	9.7	13.0	13.0	10.5
Test procedu	ure AS 1289.5.7.1							
Test No			1	2	3	4	5	6
Compactive e	effort				Stan	dard		
Oversize rock	retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of ove	ersize material	wet	0	0	0	0	0	0
Peak Convert	ted Wet Density	t/m³	2.16	2.15	2.16	2.16	2.14	2.14
Adjusted Pea	k Converted Wet Dens	sity t/m³	-	-	-	-	-	-
Optimum Moi	sture Content	%	12.5	12.5	11.5	15.0	15.0	12.5
Maiat	ture Variation From		2.09/	2.59/	2.09/	2.00/	2.09/	2.0%
Optim	ure Variation From		2.0%	2.5%	2.0%	2.0%	2.0%	2.0%
Optime			ury	ury	ury	ury	ury	ury
Density Ratio	o(R _{HD})	%	101.0	101.0	101.0	101.0	100.0	100.5
Density Ratio	р (R _{HD}) ription Box Hill Mudstone	%	101.0	101.0	101.0	101.0	100.0	100.5

Jutin 2



CIVIL GEOTECHNICAL SERVICES						ob No Report No	19417 19417/R002
/don 3136					D	ate Issued	21/08/2019
Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Tested						ested by	AC
VINE - STAGE 5	Я				D	ate tested	15/07/19
NNYBROOK					C	hecked by	JHF
PING		Lay	er thickness	285	mm	Time:	12:08
S 1289.2.1.1 &	5.8.1						
		7	8	9	10	11	12
		Faculty	Avenue		Institute Driv	ve	Federation
		•					Avenue
	Chainage	340	390	340	290	240	50
	Offset	1.8	1.8	1.8	1.8	1.8	1.8
		south	north	west	east	west	east
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
below FSL							
h	mm	275	275	275	275	275	275
	t∕m³	2.23	2.22	2.17	2.16	2.17	2.16
ent	%	13.0	12.9	12.4	9.3	9.0	9.3
<u>S 1289.5.7.1</u>	r			-	10		
	_	/	8	9	10	11	12
ned on sieve		10.0	10.0	Stan		10.0	10.0
ned on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
material	wet	0	0	2 10	0	0	0
er Density	city t/m3	2.24	2.23	2.19	2.17	2.10	2.10
veneu wei Den	sity ville	-	-	-	-	-	-
Contont	0/	166	160	115	115	1110	115
Content	%	15.5	15.0	14.5	11.5	11.0	11.5
Content	%	15.5	15.0	14.5	11.5	11.0	11.5
Content	%	2.0%	2.0%	14.5 2.0%	2.0%	2.0%	2.0%
Content ariation From pisture Content	%	15.5 2.0% dry	15.0 2.0% dry	14.5 2.0% dry	11.5 2.0% dry	2.0% dry	2.0% dry
Content ariation From pisture Content	%	15.5 2.0% dry	2.0% dry	14.5 2.0% dry	11.5 2.0% dry	2.0% dry	2.0% dry
	vidon 3136 ISLOW CONSTI VINE - STAGE 5 VNYBROOK PPING S 1289.2.1.1 & below FSL h ent S 1289.5.7.1 hed on sieve material et Density verted Wet Densi	vidon 3136 ISLOW CONSTRUCTORS P VINE - STAGE 5A VNYBROOK PPING S 1289.2.1.1 & 5.8.1 Chainage Offset below FSL h mm t/m³ ent % S 1289.5.7.1 S 1289.5.7.1 ned on sieve mm material wet et Density t/m³ verted Wet Density t/m³	rdon 3136 ISLOW CONSTRUCTORS PTY LTD (CA VINE - STAGE 5A VNYBROOK PING Lay S 1289.2.1.1 & 5.8.1 Chainage 0ffset 1.8 south of kerb below FSL h mm t/m^3 2.23 ent % S 1289.5.7.1 7 material wet omaterial wet werted Wet Density t/m^3	Year 3136 ISLOW CONSTRUCTORS PTY LTD (CAMPBELLFIE VINE - STAGE 5A NYBROOK PING Layer thickness S 1289.2.1.1 & 5.8.1 Chainage 340 Offset 1.8 South Offset 1.8 South of kerb below FSL h mm 275 275 13.0 12.9 S 1289.5.7.1 T 8 need on sieve mm 19.0 material wet 0 0 et Density t/m³ yerted Wet Density t/m³	Year Year $don 3136$ ISLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) VINE - STAGE 5A NYBROOK PING Layer thickness 285 S 1289.2.1.1 & 5.8.1 7 8 9 Faculty Avenue Chainage 340 390 340 Offset 1.8 1.8 1.8 below FSL below FSL below FSL below FSL 13.0 12.9 12.4 S 1289.5.7.1 T 8 9 Star Star The of a size mm 19.0 19.0 Star Star Star Star Star The of a size mm 19.0 19.0 The of a size mm	Image: Standard on 3136 Image: Standar	Topology Inspective don 3136 Date Issued don 3136 Date Issued ISLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Tested by VINE - STAGE 5A Date tested NYBROOK Checked by PPING Layer thickness 285 mm S 1289.2.1.1 & 5.8.1 T 8 9 10 11 Faculty Avenue Institute Drive Institute Drive 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8

Jutin 5



CIVIL GEOTECHNICAL SERVICES Report No 1941							
6 - 8 Rose Avenue, Croydon 3136 Date Issued							
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC				
Project	OLIVINE - STAGE 5A	Date tested	15/07/19				
Location	DONNYBROOK	Checked by	JHF				

Feature

CAPPING

Layer thickness 285 / 300 mm

Time: 13:04

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		13	14	15	16	17	18
Location		Foundation Avenue		Downtown	Vicinity	Precinct	Olivine
				Avenue	Road	Way	Boulevard
		80	130	10	10	10	1120
		1.8	1.8	1.8	1.8	1.8	2.2
		west	east	west	east	west	east
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
Approximate depth below FSL							
Measurement depth	mm	275	275	275	275	275	275
Field wet density	t∕m³	2.04	2.04	2.04	2.17	2.18	2.17
Field moisture content	%	12.6	12.7	11.6	10.3	10.2	9.6
Test procedure AS 1289.5.7.1			1			1	
Test No		13	14	15	16	17	18
Compactive effort			Standard				
Oversize rock retained on sieve	тт	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	2.08	2.07	2.05	2.19	2.19	2.16
Adjusted Peak Converted Wet Density	t∕m³	-	-	-	-	-	-
Optimum Moisture Content	%	14.5	14.5	14.0	12.5	12.5	11.5
Moisture Variation From		2.0%	1.5%	2.5%	2.0%	2.0%	2.0%
Optimum Moisture Content		dry	dry	dry	dry	dry	dry
Density Ratio(R _{HD})	%	98.0	99.0	99.5	99.0	99.5	100.0
Material description							
,							
No 13 - 18 Boxhill Mudstone							



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

AVRLOT HILF V1.10 MAR 13



CIVIL GEOTECHNICAL SERVICES 6 - 8 Rose Avenue, Croydon 3136						Job No Report No Date Issued	19417 19417/R004 21/08/2019	
WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)Tested byACOLIVINE - STAGE 5ADate tested15/07/1DONNYBROOKChecked byJHF						AC 15/07/19 JHF		
CAPPING		Lay	er thickness	150	mm	Time:	14:05	
re AS 1289.2.1.1 & t	5.8.1	10	20	21	22	- 23	24	
		13	20				24	
			Науе	s Hill Boulev	ard (west	Bound)		
	Chainaga	820	770	720	670	620	570	
	Offset	1.8	18	1.8	18	1.8	1.8	
	0//302	south	north	south	north	south	north	
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb	
epth below FSL								
depth	mm	125	125	125	125	125	125	
ity	t∕m³	2.12	2.11	2.10	2.18	2.20	2.18	
content	%	12.7	13.2	12.0	10.1	10.2	10.4	
re AS 1289.5.7.1				1			T	
		19	20	21	22	23	24	
ort		10.0	10.0	Stan	dard			
etained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0	
rsize material	Wet	0	0	0	0	0	0	
a wet Density	1/111 ³	2.09	2.09	2.07	2.17	2.20	2.17	
Converted wet Densi	ty t/11°	-	-	-	-	- 11.5	-	
	70	14.5	15.0	14.0	12.0	6.11	12.0	
re Variation From		2.0%	2.0%	2.0%	2.0%	1.5%	1.5%	
n Moisture Content		dry	dry	dry	dry	dry	dry	
						400.0		
	CAPPING re AS 1289.2.1.1 & 5 epth below FSL depth ity content re AS 1289.5.7.1 fort retained on sieve rsize material rd Wet Density Converted Wet Densi ture Content re Variation From	CAPPING re AS 1289.2.1.1 & 5.8.1 Chainage Offset epth below FSL depth mm ity t/m³ content % re AS 1289.5.7.1 fort retained on sieve mm rsize material wet rd Wet Density t/m³ Converted Wet Density t/m³ ture Content %	CAPPING Lay re AS 1289.2.1.1 & 5.8.1 19 Chainage Offset B20 Offset 1.8 South of kerb 5.8.1 epth below FSL 9 depth mm 125 1.1 ity t/m³ content % 12.7 12 re AS 1289.5.7.1 19 10 fort 19 retained on sieve mm 19 0 retained on sieve mm 19 0 retained on sieve mm of Wet Density t/m³ converted Wet Density t/m³ of Wet Density t/m³ ture Content % ver Variation From 2.0%	CAPPING Layer thickness re AS 1289.2.1.1 & 5.8.1 19 20 Haye Chainage 820 770 Offset 1.8 1.8 1.8 south north of kerb of fiset 1.8 1.8 South north of kerb of kerb of kerb of kerb of kerb 0 of kerb of kerb Offset 12.5 depth mm 125 125 depth mm 12.7 13.2 re AS 1289.5.7.1 19 20 19.0 resize material wet 0 0 of of test index on sieve mm 19.0 19.0 resize material wet 0 0 of of test index on sieve - tree Content % 14.5 15.0	CAPPING Layer thickness 150 re AS 1289.2.1.1 & 5.8.1 Image: Provide the state of the	CAPPING Layer thickness 150 mm re AS 1289.2.1.1 & 5.8.1 19 20 21 22 Hayes Hill Boulevard (West Chainage 820 770 720 670 Offset 1.8 1.8 1.8 1.8 1.8 epth below FSL 125 125 125 125 125 depth mm 125 125 125 125 125 ity t/m³ 2.12 2.11 2.10 2.18 content % 12.7 13.2 12.0 10.1 re AS 1289.5.7.1 19 20 21 22 fort Standard Standard Standard retained on sieve mm 19.0 19.0 19.0 19.0 dW to Density t/m³ 2.09 2.09 2.07 2.17 Converted Wet Density t/m³ - - - - 2.0% <td>CAPPING Layer thickness 150 mm Time: re AS 1289.2.1.1 & 5.8.1 19 20 21 22 23 Hayes Hill Boulevard (West Bound) Chainage Offset 820 770 720 670 620 Chainage Offset 820 770 720 670 620 Chainage Offset 820 1.8 1.8 1.8 1.8 1.8 epth below FSL 0 6 kerb of kerb of kerb of kerb of kerb of kerb epth below FSL 0 12.5 125 125 125 125 125 ty t/m³ 2.12 2.11 2.10 2.18 2.20 content % 12.7 13.2 12.0 10.1 10.2 re AS 1289.5.7.1 19 20 21 22 23 fort Standard retained on sieve mm 19.0 19.0 19.0 r</td>	CAPPING Layer thickness 150 mm Time: re AS 1289.2.1.1 & 5.8.1 19 20 21 22 23 Hayes Hill Boulevard (West Bound) Chainage Offset 820 770 720 670 620 Chainage Offset 820 770 720 670 620 Chainage Offset 820 1.8 1.8 1.8 1.8 1.8 epth below FSL 0 6 kerb of kerb of kerb of kerb of kerb of kerb epth below FSL 0 12.5 125 125 125 125 125 ty t/m³ 2.12 2.11 2.10 2.18 2.20 content % 12.7 13.2 12.0 10.1 10.2 re AS 1289.5.7.1 19 20 21 22 23 fort Standard retained on sieve mm 19.0 19.0 19.0 r	

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

Juten 9

Approved Signatory : Justin Fry



ES					Job No Report No	19417 19417/R005
					Date Issued	19/08/2019
Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Test						AC
GE 5A					Date tested	15/07/19
<u> </u>					Спескеа by	JHF
	Lay	er thickness	150	mm	Time.	15:09
18581						
. 1 & 0.0.1	25	26	27	28	29	30
		Haye	es Hill Boulev	vard (East	Bound)	
	570	620	670	720	770	820
	1.8	1.8	1.8	1.8	1.8	1.8
	north	south	north	south	north	south
	of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
mm	125	125	125	125	125	125
t/m³	2.04	2.09	2.07	2.20	2.22	2.20
%	13.9	12.9	12.5	10.6	11.1	11.0
_ ,						
<u>.1</u>	25	26	27	20	20	20
	20	20	21 Stop	20 dard	29	30
	10.0	10.0	10 N	10 N	37.5	19.0
;	0	8	6	19.0	0	15.0
t/m ³	2 05	2.08	2.07	2 18	2 18	2 17
Densitv t/m³	-	2.11	2.09	2.22	2.22	2.20
2 onoty 4 m %	16.5	15.0	14.0	12.0	12.5	12.0
m	2.5%	2.0%	1 5%	1.5%	1.5%	1.0%
	2.070	2.070	dry	drv	drv	drv
'ent	arv	arv				
tent	ary	ary	ury	ury	Giry	ury
	GE 5A < .1 & 5.8.1 .1 & 5.8.1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .	GE 5A (<i>Lay</i> <i>.1 & 5.8.1</i> 25 570 1.8 north of kerb <i>mm</i> 125 <i>t/m</i> ³ 2.04 % 13.9 <i>t/m</i> ³ 2.04 % 13.9 <i>t/m</i> ³ 2.04 % 13.9 <i>t/m</i> ³ 2.05 <i>bensity t/m</i> ³ - % 16.5	GE 5A <i>Layer thickness</i> <i>Layer thickness</i> <i>Layer thickness</i> <i>Layer thickness</i> <i>Layer thickness</i> <i>Layer thickness</i> <i>Layer thickness</i> <i>1 & 5.8.1</i> <i>25 26</i> <i>Haye</i> <i>570 620</i> <i>1.8 1.8 1.8 south of kerb</i> <i>1.8 south of kerb</i> <i>1.8 south of kerb</i> <i>mm 125 125 125 125 125 125 125 125 125 125</i>	GE 5A Layer thickness 150 .1 & 5.8.1 25 26 27 Hayes Hill Bouley 570 620 670 1.8 1.8 1.8 1.8 north south north of kerb of kerb of kerb of kerb of kerb mm 125 125 125 1.9 12.9 12.5 125 1 25 26 27 % 13.9 12.9 12.5 1 25 26 27 % 13.9 12.9 12.5 1 25 26 27 % 13.9 12.9 12.5 1 25 26 27 570 52.08 2.07 54 9 19.0 19.0 19.0 9 0 8 6 10 8 6 6 10 16.5 15.0 14.0	Layer thickness 150 mm Layer thickness 150 mm .1 & 5.8.1 25 26 27 28 Hayes Hill Boulevard (East 570 620 670 720 1.8 1.8 1.8 1.8 north south north south of kerb of kerb of kerb of kerb mm 125 125 125 t/m³ 2.04 2.09 2.07 2.20 % 13.9 12.9 12.5 10.6 1 25 26 27 28 mm 19.0 19.0 19.0 19.0 wet 0 8 6 16 t/m³ 2.05 2.08 2.07 2.11 % 16.5 15.0 14.0 12.0	GE 5A Date tested Checked by Layer thickness 150 mm Time. .1 & 5.8.1 25 26 27 28 29 Hayes Hill Boulevard (East Bound) 570 620 670 720 770 1.8 1.8 1.8 1.8 1.8 1.8 north south north south north of kerb of kerb of kerb of kerb of kerb of kerb 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.25

5 Jutin

Approved Signatory : Justin Fry



Feature

CLASS 3

COMPACTION ASSESSMENT

		Job No	19417
CIVIL GEOTE	Report No	19417/R006	
6 - 8 Rose Ave	Date Issued	03/09/2019	
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	02/09/19
Location	DONNYBROOK	Checked by	JHF

110 mm

09:09:18

Time:

Layer thickness

Test No		31	32	33	34	35	36
Location			Institute Drive	Э	F	aculty Avenu	le
(Chainage	390	340	290	390	340	290
	Offset	18	1.8	1.8	1.8	1.8	18
	•	east	west	east	south	north	south
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
Approximate depth from F.S.L.	т						
Measurement depth	тт	75	75	75	75	75	75
Field wet density	t/m³	2.43	2.42	2.43	2.43	2.44	2.43
Field dry density	t∕m³	2.30	2.30	2.30	2.31	2.31	2.30
Field moisture content	%	6.0	5.5	6.0	5.5	5.5	6.0
Material source and location			20mm	Class 3 - M MOD	/Q, Wyndha IFIED	m Vale	
Maximum Dry Density	t∕m³			2.3	34		
Optimum Moisture Content	%			7.	5		
Test procedure AS 1289.5.4.1							
Oversize rock retained on sieve	тт	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-	-
Adjusted Maximum Dry Density	t∕m³	-	-	-	-	-	-
Adjusted Optimum Moisture Conter	nt %	-	-	-	-	-	-
Moisture Variation From		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Optimum Moisture Conter	nt	dry	dry	dry	dry	dry	dry
	T			= 0 0		- 4 0	
Moisture Ratio (R)	%	/6.0	I (1.5	/6.0	(2.5	(4.0)	1 /6.0



Density Ratio (R_D)

%

98.5

98.0

98.5

98.5

Approved Signatory : Justin Fry

99.0

98.5



		Job No	19417				
CIVIL GEOTECHNICAL SERVICES Report No							
6 - 8 Rose Aver	nue, Croydon, Vic 3136	Date Issued	03/09/2019				
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC				
Project	OLIVINE - STAGE 5A	Date tested	02/09/19				
Location	DONNYBROOK	Checked by	JHF				

Feature CLASS 3		Layer thickr	ness	110	mm	Time:	09:42:32
AS 12892.1.1 & 5.8.1							
Test No		37	38	39	40	41	42
Location		F	Faculty Avenue			Foundation Avenue	
	Chainage	240	190	140	80	130	50
	Offset	1.8	1.8	1.8	1.8	1.8	1.8
		north	east	west	east	west	east
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
Approximate depth from F.S.L.	т						
Measurement depth	mm	75	75	75	75	75	75
Field wet density	t∕m³	2.42	2.41	2.43	2.41	2.42	2.41
Field dry density	t∕m³	2.29	2.29	2.30	2.29	2.30	2.29
Field moisture content	%	6.0	5.5	6.0	5.0	5.5	5.0

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 203MWVHI)					
Date of assignment 27/08/2019					
Material source and location	20mm Class 3 - MVQ, Wyndham Vale				

Material source and location		20mm Class 3 - MVQ, Wyndnam Vale
Compactive effort		MODIFIED
Maximum Dry Density	t/m³	2.34
Optimum Moisture Content	%	7.5

Test procedure AS 1289.5.4.1							
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-	-
Adjusted Maximum Dry Density	t/m³	-	-	-	-	-	-
Adjusted Optimum Moisture Content	%	-	-	-	-	-	-
				4 = 0.4	0 = 0 (0 = 0 (
Moisture Variation From		2.0%	2.0%	1.5%	2.5%	2.5%	2.5%
Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	1.5% dry	2.5% dry	2.5% dry	2.5% dry
Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	1.5% dry	2.5% dry	2.5% dry	2.5% dry
Moisture Variation From Optimum Moisture Content Moisture Ratio (R _m)	%	2.0% dry 76.5	2.0% dry 71.5	1.5% dry 77.5	2.5% dry 68.5	2.5% dry 70.0	2.5% dry 68.5
Moisture Variation From Optimum Moisture Content Moisture Ratio (R _m)	%	2.0% dry 76.5	2.0% dry 71.5	1.5% dry 77.5	2.5% dry 68.5	2.5% dry 70.0	2.5% dry 68.5



Ó

Approved Signatory : Justin Fry



		Job No	19417
CIVIL GEOTE	CHNICAL SERVICES	Report No	19417/R008
6 - 8 Rose Aven	ue, Croydon, Vic 3136	Date Issued	03/09/2019
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project		Data tastad	00/00/40
FIOJECI	OLIVINE - STAGE 5A	Date tested	02/09/19

Chainage Offser Offser oproximate depth from F.S.L. m easurement depth mm eld wet density t/m	G 150 1.8 west of kerb 75 2.42	rammar Aver 200 1.8 east of kerb 75 2.42	25 1.8 west of kerb 75	Downtown Avenue 10 1.8 east of kerb	Vicinity Road 10 1.8 west of kerb	Precinct Way 15 1.8 east of kerb
Chainage Offset oproximate depth from F.S.L. m easurement depth mm eld wet density t/m	 150 1.8 west of kerb 75 2.42 	200 1.8 east of kerb 75 2.42	25 1.8 west of kerb 75	Avenue 10 1.8 east of kerb	Road 10 1.8 west of kerb	Way 15 1.8 east of kerb
Chainage Offset oproximate depth from F.S.L. m easurement depth mm eld wet density t/m	150 1.8 west of kerb 2 75 2.42	200 1.8 east of kerb 75 2.42	25 1.8 west of kerb 75	10 1.8 east of kerb	10 1.8 west of kerb	15 1.8 east of kerb
Offser oproximate depth from F.S.L. m easurement depth mm eld wet density t/m	1.8 west of kerb 75 2.42	1.8 east of kerb 75 2.42	1.8 west of kerb 75	1.8 east of kerb	1.8 west of kerb	1.8 east of kerb
oproximate depth from F.S.L. m easurement depth mm eld wet density t/m	west of kerb 75 2.42	east of kerb 75 2 42	west of kerb 75	east of kerb	west of kerb	east of kerb
pproximate depth from F.S.L. m easurement depth mm eld wet density t/m	of kerb 75 2.42	of kerb 75 2 42	of kerb 75	of kerb	of kerb	of kerb
opproximate depth from F.S.L.measurement depthmmeld wet densityt/m	75 2.42	75	75	75		
easurement depth mm eld wet density t/m	75 2.42	75 2.42	75	75		-
eld wet density t/m	2.42	2 4 2		75	75	75
		2.72	2.40	2.40	2.40	2.40
eld dry density t/m [:]	2.29	2.30	2.29	2.29	2.29	2.29
eld moisture content %	6.0	5.5	5.0	5.0	5.0	5.0
ate of assignment aterial source and location	of assignment rial source and location 20mm Class			8/2019 VQ, Wyndhan	n Vale	
ompactive effort			MOE	DIFIED		
aximum Dry Density t/m ²	3		2.	34		
otimum Moisture Content %			7	.5		
est procedure AS 1289.5.4.1						
versize rock retained on sieve mm	19.0	19.0	19.0	19.0	19.0	19.0
ercent of oversize material we	-	-	-	-	-	-
ercent of oversize material dry	· _	-	-	-	-	-
djusted Maximum Dry Density t/m	-	-	-	-	-	-
djusted Optimum Moisture Content %	-	-	-	-	-	-
Moisture Variation From	2.0%	2.0%	2.5%	2.5%	2.5%	2.5%
Optimum Moisture Content	drv	drv	drv	drv	drv	drv



Density Ratio (R_D)

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

98.0

98.0

A581ASSIGNED V1.13 MAR 13

%

98.0

98.5

98.0

98.0

Approved Signatory : Justin Fry



		Job No	19417
CIVIL GEOTE	CHNICAL SERVICES	Report No	19417/R009
6 - 8 Rose Aven	ue, Croydon, Vic 3136	Date Issued	03/09/2019
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	02/09/19
Location	DONNYBROOK	Checked by	JHF

Feature CLASS 3		Layer thickn	ayer thickness 150		mm	Time:	11:16:51			
12002 1 1 8 5 0 1										
AS 12092.1.1 & 5.6.1		49	50	51	52	53	54			
Location		Haves Hill Boulevard (East Bound)								
			,		,	,				
Chail	nage	550	600	650	700	750	800			
Oi	fset	1.8	1.8	1.8	1.8	1.8	1.8			
		south	north	south	north	south	north			
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb			
Approximate depth from F.S.L.	т									
Measurement depth	тт	125	125	125	125	125	125			
Field wet density	t/m³	2.43	2.42	2.42	2.43	2.42	2.41			
Field dry density	t/m³	2.30	2.29	2.29	2.29	2.29	2.30			
Field moisture content	%	6.0	5.5	5.5	6.0	5.5	5.0			
Laboratory Compaction AS 1289.5.2.1 & Date of assignment Material source and location	5.4.2	4.2 Assigned Values (See Report No 203MWVHI) 27/08/2019 20mm Class 3 - MVQ, Wyndham Vale								
Compactive effort				MOD						
Maximum Dry Density	t/m³			2.3	54					
Optimum Moisture Content	%			1.	5					
Test procedure AS 1289.5.4.1										
Oversize rock retained on sieve	тт	19.0	19.0	19.0	19.0	19.0	19.0			
Percent of oversize material	wet	-	-	-	-	-	-			
Percent of oversize material	dry	-	-	-	-	-	-			
Adjusted Maximum Dry Density	t/m³	-	-	-	-	-	-			
Adjusted Optimum Moisture Content	%	-	-	-	-	-	-			
Moisture Variation From		2.0%	2.0%	2.0%	1.5%	2.0%	2.5%			
Optimum Moisture Content		dry	dry	dry	dry	dry	dry			
			· ·	· ·	-	· ·				
Moisture Ratio (R _m)	%	76.0	74.5	74.5	77.5	71.5	68.5			
Density Ratio (R _D)	%	98.5	98.0	98.0	98.0	98.0	98.0			

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



CGS		COI	MPACTIO	N ASSES	SMENT				
						J	ob No	19417	
CIVIL GEOTEC	CHNICAL SERVICES						Report No	19417/R010	
6 - 8 Rose Aven	ue, Croydon, Vic 3136					D	ate Issued	03/09/2019	
Client	WINSLOW CONST	RUCTORS I	PTY LTD (C	AMPBELLFI	ELD)	Т	ested by	AC	
Project	ect OLIVINE - STAGE 5A							02/09/19	
Location	DONNYBROOK					C	checked by	JHF	
Feature	CLASS 3		Layer thickr	iess	150	mm	Time:	12:00:20	
AS 12892.1.	1 & 5.8.1								
Test No			55	56	57	58	59	60	
Location				Haye	s Hill Boulev	ard (West E	Bound)	•	
		-							
		Chainage	800	750	700	650	600	550	
		Offset	1.8	1.8	1.8	1.8	1.8	1.8	
			south	north	south	north	south	north	
			of kerb	of kerb	of kerb	of kerb	of kerb	of kerb	
Approximate	depth from F.S.L.	т							
Measuremen	t depth	mm	125	125	125	125	125	125	
Field wet der	nsity	t/m³	2.41	2.43	2.42	2.43	2.42	2.42	
Field dry den	isity	t/m³	2.30	2.29	2.29	2.29	2.30	2.29	
Field Moistur	e content	%	5.0	6.0	5.5	6.0	5.5	5.5	
Laboratory C	Compaction AS 1289.5	5.2.1 & 5.4.2	? Assigned \	/alues (See l	Report No 20) 3MWVHI)			
Date of assig	gnment				27/08	8/2019			
Material sour	rce and location			20mm	Class 3 - M	VQ, Wyndha	am Vale		
Compactive e	effort				MOD	IFIED			
Maximum Dr	y Density	t∕m³			2.3	34			
Optimum Mo	isture Content	%			7.	.5			
Test procedu	ıre AS 1289.5.4.1								
Oversize roc	k retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0	
Percent of ou	/ersize material	wet	-	-	-	-	-	-	
Percent of ou	/ersize material	dry	-	-	-	-	-	-	
Adjusted Ma:	ximum Dry Density	t∕m³	-	-	-	-	-	-	
Adjusted Opt	timum Moisture Conte	ent %	-	-	-	-	-	-	
Mał	oturo Variation Fran	<u> </u>	2 50/	1 50/	2 00/	2 00/	2 50/	2 00/	
			∠.ن√0 مات	070.1 مام	∠.U7⁄0 ما <i>ت</i>	∠.U7⁄0 ما <i>ت</i> د	2.070 ما <i>يت</i> ر	2.070	
Optii	mum Moisture Conte	ent	ury	ary	ary	ary	ary	ury	
Moisture Ra	tio (R _m)	%	67.0	81.0	74.5	76.0	70.0	74.5	
Moisture Ratio (R _m) % 67.0 81.0 74.5 76.0 70.0 74.5									



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation No 9909

Juli Э

Approved Signatory : Justin Fry



Г

COMPACTION ASSESSMENT

		Job No	19417
CIVIL GEOTEC	CHNICAL SERVICES	Report No	19417/R011
6 - 8 Rose Aven	ue, Croydon, Vic 3136	Date Issued	03/09/2019
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Client Project	OLIVINE - STAGE 5A	Tested by Date tested	AC 02/09/19

Feature CLASS 3	Layer thick	ness	170 mm		Time:	12:45:51
AS 12892.1.1 & 5.8.1						
Test No	61					
Location	Olivine	1 1				
	Boulevard					
Chain	age 1110	1				
Off	fset 2.2					
	east					
	of kerb					
Approximate depth from F.S.L.	т					
Measurement depth r	<i>mm</i> 150					
Field wet density t	/m³ 2.42					
Field dry density t	/m³ 2.31					
Field moisture content	% 5.0					
Compactive effort Maximum Dry Density t	/m ³		MODIF 2.34	FIED 4		
Optimum Moisture Content	%		7.5			
Tastana dan 40.4000 5.4.4						
Test procedure AS 1289.5.4.1	mm 10.0					
Percent of oversize material	1111 19.0	++				
Percent of oversize material	dry -					
Adjusted Maximum Dry Density f	/m ³ -	+				
Adjusted Optimum Moisture Content	% -	++				
	/ .	<u> </u>			I	
Moisture Variation From	2.5%					
Optimum Moisture Content	dry					
Moisture Ratio (R)	% 64.0	Т				
	/0 04.0	L				
Density Ratio (R_D)	% 98.5					
/						

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing



Feature

CLASS 2

COMPACTION ASSESSMENT

		Job No	19417
CIVIL GEOTEC	CHNICAL SERVICES	Report No	19417/R012
6 - 8 Rose Aven	ue, Croydon, Vic 3136	Date Issued	28/10/2019
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	28/10/19
Location	DONNYBROOK	Checked by	JHF

130 mm

07:20:19

Time:

Layer thickness

Test No		62	63	64	65	66	67
Location		Grammar Avenue		F	Faculty Avenue		
	Chainage	150	200	250	140	190	240
	Offset	1.8	1.8	1.8	1.8	1.8	1.8
		east	west	east	west	east	north
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerk
Approximate depth from F.S.L.	т						
Measurement depth	mm	100	100	100	100	100	100
Field wet density	t∕m³	2.40	2.40	2.39	2.40	2.40	2.41
Field dry density	t∕m³	2.26	2.27	2.26	2.28	2.28	2.26
Field moisture content	%	6.0	5.5	6.0	5.5	5.5	6.5

Date of assignment		10/10/2019
Material source and location		20mm Class 2 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	t∕m³	2.30
Optimum Moisture Content	%	7.5

Test procedure AS 1289.5.4.1							
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-	-
Adjusted Maximum Dry Density	t∕m³	-	-	-	-	-	-
Adjusted Optimum Moisture Content	%	-	-	-	-	-	-
Moisture Variation From		1.0%	2.0%	1.5%	2.0%	2.0%	1.0%
Optimum Moisture Content		dry	dry	dry	dry	dry	dry
Moisture Ratio(R _m)	%	83.0	74.5	78.0	73.0	71.0	86.5
Donsity Patio (P)	0/	09.5	00.0	00 5	00.0	00.0	09.5



Approved Signatory : Justin Fry



		Job No	19417
CIVIL GEOTE	CHNICAL SERVICES	Report No	19417/R013
6 - 8 Rose Ave	nue, Croydon, Vic 3136	Date Issued	28/10/2019
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	OLIVINE - STAGE 5A	Date tested	28/10/19
Location	DONNYBROOK	Checked by	JHF

Feature CLASS 2		Layer thickr	iess	130	mm	Time:	08:05:25
AS 12892.1.1 & 5.8.1							
Test No		68	69	70	71	72	73
Location		F	aculty Avenu	le		Institute Driv	e
	Chainage	290	340	390	340	290	240
	Offset	1.8	1.8	1.8	1.8	1.8	1.8
		south	north	south	east	west	east
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
Approximate depth from F.S.L.	т						
Measurement depth	mm	100	100	100	100	100	100
Field wet density	t/m³	2.36	2.36	2.36	2.35	2.34	2.35
Field dry density	t∕m³	2.27	2.28	2.25	2.25	2.25	2.26
Field moisture content	%	4.0	4.0	4.5	4.5	4.0	4.0

Laboratory Compaction AS 1289.5.2.1 & S	5.4.2 Assigned Values (See Report No 202MVDCD)
Date of assignment	10/10/2019
Material source and location	20mm Class 2 MV/O Doppybrook

Material source and location		20mm Class 2 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	t/m³	2.30
Optimum Moisture Content	%	7.5

Test procedure AS 1289.5.4.1							
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-	-
Adjusted Maximum Dry Density	t/m³	-	-	-	-	-	-
Adjusted Optimum Moisture Content	%	-	-	-	-	-	-
			•				
Moisture Variation From		3.0%	3.5%	3.0%	3.0%	3.5%	3.5%
Optimum Moisture Content		dry	dry	dry	dry	dry	dry
Moisture Ratio (R _m)	%	56.5	52.0	60.5	62.0	56.0	52.5
Moisture Ratio (R _m)	%	56.5	52.0	60.5	62.0	56.0	52.5



0

Approved Signatory : Justin Fry



					Job No	19417
CIVIL GEOTE	CHNICAL SERVICES				Report No	19417/R014
6 - 8 Rose Ave	enue, Croydon, Vic 3136				Date Issued	28/10/2019
Client	WINSLOW CONSTRUCTO	ORS PTY LTD (C	AMPBELLF	IELD)	Tested by	AC
Project	OLIVINE - STAGE 5A				Date tested	28/10/19
Location	DONNYBROOK				Checked by	JHF
Feature	CLASS 2	Layer thickn	ess	130 mm	Time:	08:48:30
AS 12892	118581					
Test No		74	75	76		
Location		Federation	Foundatio	on Avenue		
		Avenue				
	Chain	age 50	130	80		

	Offset	1.8	1.8	1.8		
		east	west	east		
		of kerb	of kerb	of kerb		
Approximate depth from F.S.L.	т					
Measurement depth	тт	100	100	100		
Field wet density	t∕m³	2.36	2.36	2.35		
Field dry density	t∕m³	2.25	2.26	2.25		
Field moisture content	%	4.5	4.5	4.5		

Laboratory Compaction AS 1289.5.2.1 & 5.4.	2 Assigned Values (See Report No 202MVDCD)
Date of assignment	10/10/2019

Late et aceigniterit		
Material source and location		20mm Class 2 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	t/m³	2.30
Optimum Moisture Content	%	7.5

Test procedure AS 1289.5.4.1						
Oversize rock retained on sieve	mm	19.0	19.0	19.0		
Percent of oversize material	wet	-	-	-		
Percent of oversize material	dry	-	-	-		
Adjusted Maximum Dry Density	t/m³	-	-	-		
Adjusted Optimum Moisture Content	%	-	-	-		
					-	
Moisture Variation From		3.0%	2.5%	3.0%		
Moisture Variation From Optimum Moisture Content		3.0% dry	2.5% dry	3.0% dry		
Moisture Variation From Optimum Moisture Content		3.0% dry	2.5% dry	3.0% dry		
Moisture Variation From Optimum Moisture Content Moisture Ratio (R _m)	%	3.0% dry 62.0	2.5% dry 64.0	3.0% dry 61.5		
Moisture Variation From Optimum Moisture Content Moisture Ratio (R _m)	%	3.0% dry 62.0	2.5% dry 64.0	3.0% dry 61.5		



Approved Signatory : Justin Fry

1