

 CIVIL GEOTECHNICAL SERVICES
 Report No
 16427/R001

 6 - 8 Rose Avenue, Croydon, Vic 3136
 Date Issued
 18/04/2017

ClientWINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)Tested byWSProjectHAVEN ESTATE - STAGE 6Date tested02/02/2017LocationTARNEITChecked byJHF

FeatureDRAINAGELayer thickness200 mmTime:14:05:37

		1	2	3	4	5	6
Location							
							1
	Pit	12 - 30	11 - 29	27 - 10	7 - 6	5 - 15	4 - 14
							1
							1
							<u> </u>
Approximate depth from F.S.L.	m						<u> </u>
Measurement depth	mm	175	175	175	175	175	175
Field wet density	t/m³	2.39	2.40	2.43	2.39	2.40	2.40
Field dry density	t/m³	2.26	2.28	2.26	2.27	2.26	2.28
Field moisture content	%	6.0	5.5	7.0	5.5	6.5	5.5
Laboratory Compaction AS 1289.5.2.1	8542	Assigned V	Jalues (See F	Panart Na 203	PMM/V/GO)		
Date of assignment	α υ.τ.Δ	Assigned v	alues (Gec 1)		4/17		
Material source and location	-		20mm	Class 3 - M\	.,	m Vale	
Compactive effort	-			MOD		11 V C. C	
Maximum Dry Density	t/m³			2.2	<u>29</u>		
Optimum Moisture Content	%			8.	0		
- 40 4000 5 44	•						
Test procedure AS 1289.5.4.1		40.0	100	40.0	40.0	40.0	10.0
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	<del>                                     </del>	-	-	<u> </u>	<del>-</del>
Percent of oversize material	dry	-	-	-	-	-	-
	+/m3						
Adjusted Maximum Dry Density	t/m³		-	-	-	-	-
Adjusted Maximum Dry Density Adjusted Optimum Moisture Content	%	-	-	-	-	-	-
Adjusted Optimum Moisture Content							2.5%
Adjusted Optimum Moisture Content  Moisture Variation From		2.0%	2.5%	0.5%	2.5%	1.5%	2.5%
Adjusted Optimum Moisture Content				- - 0.5% dry		1.5% dry	2.5% dry
Adjusted Optimum Moisture Content  Moisture Variation From Optimum Moisture Content	%	2.0% dry	2.5% dry	dry	2.5% dry	dry	dry
Adjusted Optimum Moisture Content  Moisture Variation From		2.0%	2.5%		2.5%		



July Jo

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

Accreditation No 9909

Approved Signatory : Justin Fry



 CIVIL GEOTECHNICAL SERVICES
 Job No
 16427

 6 - 8 Rose Avenue, Croydon, Vic 3136
 Report No
 16427/R002

 Date Issued
 18/04/2017

ClientWINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)Tested byWSProjectHAVEN ESTATE - STAGE 6Date tested02/02/2017LocationTARNEITChecked byJHF

FeatureDRAINAGELayer thickness200 mmTime:14:32:18

Test No		7	8							
Location										
			1							
	Pit	21 - 22	19 - 18							
<u> </u>										
Approximate depth from F.S.L.	m									
Measurement depth	mm	175	175							
Field wet density	t/m³	2.38	2.42							
Field dry density	t/m³	2.24	2.26							
Field moisture content	%	6.0	7.0							
Laboratory Compaction AS 1289.5.2.1	9512	Assigned V	Valuas (Saa F	Papart No 201	PA/IA/I/G()					
Date of assignment	& J.4.2	Assigned v	alues (See 1							
Material source and location			20mm		05/04/17					
		20mm Class 3 - MVQ, Wyndham Vale  MODIFIED								
			2011111			ili vale				
Compactive effort  Maximum Dry Density	t/m³		20111111		IFIED	III Vale				
Compactive effort	t/m³ %		2011111	MOD	IFIED 29	iii vale				
Compactive effort Maximum Dry Density Optimum Moisture Content			2011111	MOD 2.2	IFIED 29	III vale				
Compactive effort Maximum Dry Density Optimum Moisture Content Test procedure AS 1289.5.4.1				MOD 2.2	IFIED 29	iii vale				
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve		19.0	19.0	MOD 2.2	IFIED 29	-				
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material	mm wet	19.0		MOD 2.2 8.	IFIED 29 0		-			
Compactive effort  Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material	mm wet dry	19.0		MOD 2.2 8.	IFIED 29 0					
Compactive effort  Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density	mm wet dry t/m³	-	19.0	8.	IFIED 29 0 -	-				
Compactive effort  Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material	mm wet dry	-	19.0	8.	IFIED 29 0 -	-				
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Content	mm wet dry t/m³		19.0 - - - -	8.	FIED					
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Content  Moisture Variation From	mm wet dry t/m³	2.0%	19.0 - - - - - 1.0%	8.	FIED					
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Content	mm wet dry t/m³		19.0 - - - -	8.	FIED					
Compactive effort  Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Content  Moisture Variation From Optimum Moisture Content	mm wet dry t/m³ %	2.0% dry	19.0 - - - - - 1.0% dry	8.	FIED					
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Content  Moisture Variation From	mm wet dry t/m³	2.0%	19.0 - - - - - 1.0%	8.	FIED					



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

Accreditation No 9909

Approved Signatory : Justin Fry



 CIVIL GEOTECHNICAL SERVICES
 Report No
 16427/R003

 6 - 8 Rose Avenue, Croydon, Vic 3136
 Date Issued
 03/02/17

 Client
 WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Tested by
 NB

 Project
 HAVEN ESTATE - STAGE 6
 Date tested
 02/02/17

 Location
 TARNEIT
 Checked by
 JHF

FeatureCAPPINGLayer thickness150 mmTime:13:01:02

Test No		9	10	11	12	13	14
Location			Leo A	venue		Homela	nd Drive
	Chainage	200	250	300	400	50	100
	Offset	2.0	2.0	2.0	2.0	2.0	2.0
		north	south	north	south	north	south
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb
Approximate depth from F.S.L.	т						
Measurement depth	mm	125	125	125	125	125	125
Field wet density	t/m³	2.21	2.20	2.22	2.21	2.24	2.24
Field dry density	t/m³	1.98	1.99	2.01	1.98	2.02	2.02
Field moisture content	%	10.5	10.0	10.0	11.0	10.0	10.0
Maximum Dry Density Optimum Moisture Content Test procedure AS 1289.5.4.1	t/m³ %			1.9 12			
Oversize rock retained on sieve	mm	37.5	37.5	37.5	37.5	37.5	37.5
Percent of oversize material	wet	-	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-	-
Adjusted Maximum Dry Density	t/m³	-	-	-	-	-	-
Adjusted Optimum Moisture Conte	nt %	-	-	-	-	-	-
Moisture Variation Fron	,	1.5%	2.0%	2.0%	1.0%	2.0%	2.0%
Optimum Moisture Conte	ent	dry	dry	dry	dry	dry	dry
Moisture Ratio (R <sub>m</sub> )	%	90.0	85.5	85.0	93.5	85.0	85.0
Density Ratio (R <sub>D</sub> )	%	99.5	100.0	100.5	99.0	101.5	101.5



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 CIVIL GEOTECHNICAL SERVICES
 Report No
 16427/R004

 6 - 8 Rose Avenue, Croydon, Vic 3136
 Date Issued
 14/02/17

 Client
 WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Tested by
 NB

 Project
 HAVEN ESTATE - STAGE 6
 Date tested
 03/02/17

 Location
 TARNEIT
 Checked by
 JHF

FeatureCAPPINGLayer thickness150 mmTime:13:09:08

Test No		15	16	17	18	19
Location		Sidon	Circuit	Н	omeland Dri	ve
	Chainage	25	335	150	200	250
	Offset	2.0	3.6	1.4	2.1	3.0
		east	west	north	south	north
		of kerb	of kerb	of kerb	of kerb	of kerb
Approximate depth from F.S.L.	т					
Measurement depth	mm	125	125	125	125	125
Field wet density	t/m³	2.17	2.19	2.15	2.18	2.17
Field dry density	t/m³	1.97	1.98	1.95	1.97	1.97
Field moisture content	%	10.0	10.0	10.0	10.0	10.0
			4011111		VQ, Wyndha	ım vaie
Material source and location Compactive effort Maximum Dry Density Optimum Moisture Content	t/m³ %		4011111	STAN 1.	DARD	ım vale
Compactive effort Maximum Dry Density			4011111	STAN 1.	DARD 99	im vale
Compactive effort Maximum Dry Density Optimum Moisture Content Test procedure AS 1289.5.4.1		37.5	37.5	STAN 1.	DARD 99	37.5
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material	%	37.5		STAN 1.: 12	DARD 99 2.5	
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material	% mm	37.5		STAN 1.: 12	DARD 99 2.5	
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density	mm wet dry t/m³	-	37.5	STAN 1.1 12 37.5	DARD 99 2.5 37.5	37.5
Compactive effort Maximum Dry Density Optimum Moisture Content Test procedure AS 1289.5.4.1	mm wet dry t/m³	-	37.5	STAN 1.1 12 37.5	DARD 99 2.5 37.5	37.5
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Conte	mm wet dry t/m³ ent %	- - -	37.5 - - - -	37.5 - -	37.5 - - -	37.5
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Conte	mm wet dry t/m³ ent %	- - - - 2.5%	37.5 - - - - - 2.0%	37.5 - - - - - 2.5%	37.5 - - - - - - - - -	37.5 - - - - - - 2.5%
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Conte	mm wet dry t/m³ ent %	- - -	37.5 - - - -	37.5 - -	37.5 - - -	37.5
Compactive effort Maximum Dry Density Optimum Moisture Content  Test procedure AS 1289.5.4.1 Oversize rock retained on sieve Percent of oversize material Percent of oversize material Adjusted Maximum Dry Density Adjusted Optimum Moisture Conte	mm wet dry t/m³ ent %	- - - - 2.5%	37.5 - - - - - 2.0%	37.5 - - - - - 2.5%	37.5 - - - - - - - - -	37.5 - - - - - - 2.5%



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 CIVIL GEOTECHNICAL SERVICES
 Report No
 16427/R005

 6 - 8 Rose Avenue, Croydon, Vic 3136
 Date Issued
 30/02/2017

6 - 8 Rose Avenue, Croydon, Vic 3136

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)

Project HAVEN ESTATE - STAGE 6

Location TARNEIT

Date Issued 30/02/2017

Tested by N B

23/02/17

Checked by JHF

FeatureLCASS 3Layer thickness225 mmTime:08:05:28

Test No		20	21	22	23	24	25	
Location				Leo Avenue			homeland	
							drive	
	Chainage	200	250	300	350	400	50	
	Offset	2.0	2.0	2.0	2.0	2.0	2.0	
		north	south	north	south	north	south	
		of kerb	of kerb	of kerb	of kerb	of kerb	of kerb	
Approximate depth from F.S.L.	m							
Measurement depth	mm	175	175	175	175	175	175	
Field wet density	t/m³	2.41	2.44	2.41	2.39	2.45	2.36	
Field dry density	t/m³	2.28	2.31	2.28	2.26	2.32	2.24	
Field moisture content	%	6.0	6.0	5.5	6.0	6.0	5.5	
Compactive effort  Maximum Dry Density	t/m³	MODIFIED 2.29						
Optimum Moisture Content	%			8	.0			
Test procedure AS 1289.5.4.1		40.0	40.0	40.0	40.0	40.0	100	
Oversize rock retained on sieve Percent of oversize material	mm	19.0	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet dry	<u> </u>	-	-	-	-	-	
Adjusted Maximum Dry Density	t/m³	<u> </u>		_	_	_		
Adjusted Maximum Moisture Content				_	_	_	<u> </u>	
riajacioa opiimam moiotaro comene	70							
Moisture Variation From		2.0%	2.0%	2.5%	1.5%	2.0%	2.0%	
Optimum Moisture Conten	t	dry	dry	dry	dry	dry	dry	
Moisture Ratio (R <sub>m</sub> )	%	76.5	75.5	70.0	77.5	74.0	72.5	
Density Ratio (R <sub>D</sub> )	%	99.5	101.0	100.0	98.5	101.5	98.0	



July Jz



Job No CIVIL GEOTECHNICAL SERVICES

Report No 16427/R006 6 - 8 Rose Avenue, Croydon, Vic 3136 Date Issued 30/02/2017

WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Tested by NΒ Project HAVEN ESTATE - STAGE 6 Date tested 23/02/17 Location **TARNEIT** Checked by JHF

CLASS 3 Feature Layer thickness 215 mm 09:04:03 Time:

Test No		26	27	28	29		
Location			Homela	nd Drive			
	Chainage	100	150	200	250		
	Offset	2.0	2.0	2.0	2.0		
		north	south	north			
		of kerb	of kerb	of kerb	of kerb		
Approximate depth from F.S.L.	m						
Measurement depth	mm	175	175	175	175		
Field wet density	t/m³	2.41	2.41	2.39	2.41		
Field dry density	t/m³	2.26	2.28	2.25	2.26		
Field moisture content	%	6.0	5.5	6.0	6.5		
Laboratory Compaction AS 1289.	5.2.1 & 5.4.2	Assigned V	'alues (See F	Report No 20	3MWVGU)		
Date of assignment				17/02	2/2017		
Material source and location			20mm	Class 3 - M	VQ, Wyndhan	n Vale	
Compactive effort		•		MOD	IFIED		
Maximum Dry Density	t/m³	-		2.	29		

Date of assignment		17/02/2017
Material source and location		20mm Class 3 - MVQ, Wyndham Vale
Compactive effort		MODIFIED
Maximum Dry Density t/n	n³	2.29
Optimum Moisture Content	%	8.0

Test procedure AS 1289.5.4.1
------------------------------

Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	ı	-	-	-	
Percent of oversize material	dry	ı	-	-	-	
Adjusted Maximum Dry Density	t/m³	1	-	-	-	
Adjusted Optimum Moisture Content	%		-	-	-	

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	1.5% dry	1.5% dry	
Moisture Ratio (R <sub>m</sub> ) %	81.0	74.5	78.0	84.0	

Density Ratio (R <sub>D</sub> )	%	99.0	99.5	98.5	99.0	



Approved Signatory : Justin Fry

A581ASSIGNED V1.13 MAR 13

16427



Job No 16427 CIVIL GEOTECHNICAL SERVICES Report No 16427/R007 6 - 8 Rose Avenue, Croydon, Vic 3136 Date Issued 30/02/2017 WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) Tested by NΒ Project HAVEN ESTATE - STAGE 6 Date tested 23/02/17 Location **TARNEIT** Checked by JHF

FeatureCLASS 3Layer thickness150 mmTime:09:28:58

Test No		30	31			
Location		Sidon	Circuit			
				1		
(	Chainage	25	330	1		
	Offset	2.0	2.0			
		east	west			
		of kerb	of kerb			
Approximate depth from F.S.L.	m					
Measurement depth	mm	125	125			
Field wet density	t/m³	2.49	2.44			
Field dry density	t/m³	2.30	2.26			
Field moisture content	%	8.5	7.5			
Material source and location Compactive effort Maximum Dry Density	t/m³		2011111	Class 3 - MVC MODIF 2.29	IED	vale
Optimum Moisture Content	%			8.0		
Test procedure AS 1289.5.4.1						
Oversize rock retained on sieve	mm	19.0	19.0			
Percent of oversize material	wet	-	-			
Decree of all a send a send of all	dry	-	-			
Percent of oversize material						
	t/m³	-	-			
Adjusted Maximum Dry Density	t/m³	-	-			
Adjusted Maximum Dry Density Adjusted Optimum Moisture Conten	t/m³					
Adjusted Maximum Dry Density Adjusted Optimum Moisture Conten  Moisture Variation From	t/m³ t %	1.0%	0.0%			
Adjusted Maximum Dry Density Adjusted Optimum Moisture Conten	t/m³ t %		0.0% wet			
Adjusted Maximum Dry Density Adjusted Optimum Moisture Conten  Moisture Variation From	t/m³ t %	1.0%				



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