COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

Job No	17562		
Report No	17562/R001		
Date Issued	27/09/2017		
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	26/09/17
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CAPPING**	*Layer thickness*	150 mm	*Time:*	13:43:20

AS 12892.1.1 & 5.8.1

Test No		**1**	**2**	**3**	**4**	**5**	**6**
Location		Debonair Parade					
Chainage		50	100	150	200	250	300
Offset		1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 west of kerb
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	125	125	125	125	125	125
Field wet density	*t/m³*	2.27	2.30	2.28	2.31	2.30	2.33
Field dry density	*t/m³*	2.11	2.14	2.12	2.14	2.16	2.15
Field moisture content	*%*	7.0	7.0	7.5	7.5	6.5	8.0

Laboratory Compaction AS 1289.5.1.1 & 5.4.2 Assigned Values (See Report No 40AMWQADP)

Date of assignment		15/09/2017
Material source and location		40mm Capping - MVQ, Donnybrook
Compactive effort		STANDARD
Maximum Dry Density	*t/m³*	2.15
Optimum Moisture Content	*%*	9.5

Test procedure AS 1289.5.4.1

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 Content	*%*	-	-	-	-	-	-

Moisture Variation From Optimum Moisture Content		2.0% dry	2.0% dry	1.5% dry	1.5% dry	2.5% dry	0.5% dry
Moisture Ratio (R_m)	*%*	80.5	78.5	82.5	83.5	71.5	94.0
Density Ratio (R_D)	*%*	**98.5**	**99.5**	**98.5**	**100.0**	**100.5**	**100.0**

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

Job No	17562		
Report No	17562/R002		
Date Issued	27/09/2017		
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	26/09/17
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 3**	*Layer thickness*	150 mm	*Time:*	14:13:15

AS 12892.1.1 & 5.8.1

Test No		**7**	**8**	**9**	**10**		
Location		Sunmoth Road					
	Chainage	40	90	140	190		
	Offset	1.8 north of kerb	1.8 south of kerb	1.8 north of kerb	1.8 south of kerb		
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	125	125	125	125		
Field wet density	*t/m³*	2.38	2.37	2.37	2.38		
Field dry density	*t/m³*	2.24	2.24	2.22	2.25		
Field moisture content	*%*	6.0	5.5	6.5	6.0		

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 203MVDBO)

Date of assignment		31/08/2017
Material source and location		20mm Class 3 - MVQ, Wyndham Vale
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	2.25
Optimum Moisture Content	*%*	8.5

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*	-	-	-	-		
Percent of oversize material	*dry*	-	-	-	-		
Adjusted Maximum Dry Density	*t/m³*	-	-	-	-		
Adjusted Optimum Moisture Content	*%*	-	-	-	-		

Moisture Variation From Optimum Moisture Content		2.0% dry	2.5% dry	1.5% dry	2.0% dry		
Moisture Ratio (R_m)	*%*	74.5	69.5	80.0	74.5		
Density Ratio (R_D)	*%*	**99.5**	**99.5**	**99.0**	**99.5**		

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NATA ACCREDITED FOR TECHNICAL COMPETENCE

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

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

		Job No	17562
		Report No	17562/R003
		Date Issued	02/10/2017
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	28/09/17
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 3**	*Layer thickness*	150 mm	*Time:*	10:52:07

AS 12892.1.1 & 5.8.1

Test No		**11**	**12**	**13**	**14**	**15**	**16**
Location		Debonair Parade					
	Chainage	50	100	150	200	250	300
	Offset	1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 west of kerb
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	125	125	125	125	125	125
Field wet density	*t/m³*	2.39	2.36	2.36	2.39	2.37	2.39
Field dry density	*t/m³*	2.25	2.22	2.23	2.25	2.20	2.23
Field moisture content	*%*	6.0	6.5	5.5	6.0	7.0	7.0

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 203MVDBO)

Date of assignment		31/08/2017
Material source and location		20mm Class 3 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	2.25
Optimum Moisture Content	*%*	8.5

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 Optimum Moisture Content		2.5% dry	2.0% dry	2.5% dry	2.0% dry	1.0% dry	1.0% dry
Moisture Ratio (R_m)	*%*	71.5	78.5	69.5	76.0	89.5	90.0
Density Ratio (R_D)	*%*	**100.0**	**98.5**	**99.0**	**99.5**	**98.0**	**99.0**

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

Job No	17562		
Report No	17562/R004		
Date Issued	02/10/2017		
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	28/09/17
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 3**	*Layer thickness*	150 mm	*Time:*	10:54:49

AS 12892.1.1 & 5.8.1

Test No		**17**	**18**	**19**	**20**		
Location		Debonair Parade			Aurum Way		
	Chainage	350	400	450	25		
	Offset	1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 south of kerb		
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	125	125	125	125		
Field wet density	*t/m³*	2.37	2.38	2.39	2.36		
Field dry density	*t/m³*	2.22	2.23	2.25	2.22		
Field moisture content	*%*	6.5	6.5	6.0	6.0		

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 203MVDBO)

Date of assignment		31/08/2017
Material source and location		20mm Class 3 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	2.25
Optimum Moisture Content	*%*	8.5

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*	-	-	-	-		
Percent of oversize material	*dry*	-	-	-	-		
Adjusted Maximum Dry Density	*t/m³*	-	-	-	-		
Adjusted Optimum Moisture Content	*%*	-	-	-	-		

Moisture Variation From Optimum Moisture Content		1.5% dry	1.5% dry	2.0% dry	2.5% dry		
Moisture Ratio (R_m)	*%*	82.0	80.0	77.5	72.5		
Density Ratio (R_D)	*%*	**98.5**	**99.0**	**100.0**	**98.5**		

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

Job No	17562		
Report No	17562/R005		
Date Issued	07/12/2017		
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	B G G
Project	ASTON ESTATE - STAGE 25	*Date tested*	21/11/17
Location	CRAIGIEBURN	*Checked by*	JHF

Feature	**CLASS 3**	*Layer thickness*	150 mm	*Time:*	09:40:02

AS 12892.1.1 & 5.8.1

Test No		**21**	**22**	**23**	**24**		
Location		Riverglen Drive					
Chainage		30	80	130	180		
Offset		1.8 north of kerb	1.8 south of kerb	1.8 north of kerb	1.8 south of kerb		
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	125	125	125	125		
Field wet density	*t/m³*	2.33	2.35	2.35	2.35		
Field dry density	*t/m³*	2.25	2.27	2.28	2.27		
Field moisture content	*%*	3.5	3.5	3.5	3.5		

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 203MVDBR)

Date of assignment		07/12/2017
Material source and location		20mm Class 3 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	2.27
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*	-	-	-	-		
Percent of oversize material	*dry*	-	-	-	-		
Adjusted Maximum Dry Density	*t/m³*	-	-	-	-		
Adjusted Optimum Moisture Content	*%*	-	-	-	-		

Moisture Variation From Optimum Moisture Content		5.0% dry	4.5% dry	5.0% dry	4.5% dry		
Moisture Ratio (R_m)	*%*	40.5	42.5	39.0	45.0		
Density Ratio (R_D)	*%*	**99.5**	**100.0**	**100.5**	**100.0**		

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

Job No	17562		
Report No	17562/R006		
Date Issued	16/02/2018		
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	16/02/18
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 2**	*Layer thickness*	120 mm	*Time:*	09:50:50

AS 12892.1.1 & 5.8.1

Test No		**25**	**26**	**27**	**28**	**29**	**30**
Location		Debonair Parade					
Chainage		50	100	150	200	250	300
Offset		1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 west of kerb	1.8 east of kerb	1.8 west of kerb
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	100	100	100	100	100	100
Field wet density	*t/m³*	2.41	2.39	2.40	2.42	2.39	2.39
Field dry density	*t/m³*	2.28	2.25	2.26	2.28	2.25	2.26
Field moisture content	*%*	6.0	6.0	6.0	6.0	6.0	6.0

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 202HWEI)

Date of assignment		12/02/2018
Material source and location		20mm Class 2 - Hanson, Wollert
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	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	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 Optimum Moisture Content		2.0% dry	2.0% dry	2.0% dry	1.5% dry	1.5% dry	2.0% dry
Moisture Ratio (R_m)	*%*	74.0	76.0	76.5	78.5	79.5	74.0
Density Ratio (R_D)	*%*	**99.5**	**98.5**	**99.0**	**99.5**	**98.5**	**98.5**

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

		Job No	17562
		Report No	17562/R007
		Date Issued	16/02/2018
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	16/02/18
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 2**	*Layer thickness*	120 mm	*Time:*	10:09:00

AS 12892.1.1 & 5.8.1

Test No		**31**	**32**	**33**	**34**	**35**	**36**
Location		Debonair Avenue		Aurum Way	Sunmoth Road		
Chainage		300	350	25	40	90	140
Offset		1.8 west of kerb	1.8 east of kerb	1.8 south of kerb	1.8 north of kerb	1.8 south of kerb	1.8 north of kerb
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	100	100	100	100	100	100
Field wet density	*t/m³*	2.39	2.32	2.35	2.36	2.36	2.39
Field dry density	*t/m³*	2.25	2.24	2.25	2.26	2.24	2.25
Field moisture content	*%*	6.0	3.5	4.5	4.0	5.5	6.0

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 202HWEI)

Date of assignment		12/02/2018
Material source and location		20mm Class 2 - Hanson, Wollert
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	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	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 Optimum Moisture Content		2.0% dry	4.5% dry	3.5% dry	4.0% dry	2.5% dry	2.0% dry
Moisture Ratio (R_m)	*%*	77.0	44.5	55.0	52.0	68.5	78.0
Density Ratio (R_D)	*%*	**98.5**	**98.0**	**98.5**	**99.0**	**98.0**	**98.5**

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon, Vic 3136

		Job No	17562
		Report No	17562/R008
		Date Issued	16/02/2018
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	16/02/18
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 2**	*Layer thickness*	120 mm	*Time:*	11:29:09

AS 12892.1.1 & 5.8.1

Test No		**37**					
Location		Sunmoth Road					
	Chainage	190					
	Offset	1.8 south of kerb					
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	100					
Field wet density	*t/m³*	2.38					
Field dry density	*t/m³*	2.25					
Field moisture content	*%*	6.0					

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 202HWEI)

Date of assignment		16/02/2018
Material source and location		20mm Class 2 - Hanson, Wollert
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	2.29
Optimum Moisture Content	*%*	8.0

Test procedure AS 1289.5.4.1

Oversize rock retained on sieve	*mm*	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 Optimum Moisture Content		2.0% dry					
Moisture Ratio (R_m)	*%*	73.5					
Density Ratio (R_D)	*%*	**98.0**					

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon, Vic 3136

		Job No	17562
		Report No	17562/R009
		Date Issued	20/02/2018
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	AC
Project	ASTON ESTATE - STAGE 25	*Date tested*	19/02/18
Location	CRAGIEBURN	*Checked by*	JHF

Feature	**CLASS 2**	*Layer thickness*	150 mm	*Time:*	11:36:40

AS 12892.1.1 & 5.8.1

Test No		**38**	**39**	**40**	**41**	**42**	**43**
Location		Debonair Parade		Riverglen Drive			
	Chainage	400	450	30	80	130	189
	Offset	1.8 east of kerb	1.8 west of kerb	1.8 south of kerb	1.8 north of kerb	1.8 south of kerb	1.8 north of kerb
Approximate depth from F.S.L.	*m*						
Measurement depth	*mm*	100	100	100	100	100	100
Field wet density	*t/m³*	2.32	2.30	2.29	2.29	2.29	2.29
Field dry density	*t/m³*	2.23	2.23	2.22	2.23	2.22	2.22
Field moisture content	*%*	4.0	3.0	3.0	3.0	3.5	3.0

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 202MVDBU)

Date of assignment		12/02/2018
Material source and location		20mm Class 2 - MVQ, Donnybrook
Compactive effort		MODIFIED
Maximum Dry Density	*t/m³*	2.27
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	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 Optimum Moisture Content		4.0% dry	5.0% dry	5.0% dry	5.5% dry	5.0% dry	5.0% dry
Moisture Ratio (R_m)	*%*	49.0	38.0	36.5	35.0	41.0	37.5
Density Ratio (R_D)	*%*	**98.5**	**98.5**	**98.0**	**98.5**	**98.0**	**98.0**

Approved Signatory : Justin Fry