GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Job No: 8599/84
Our Ref: 8599/84-AB
6 December 2023

Daracon Contractors Pty Ltd
184 Adderley Street West
AUBURN NSW 2144
Email: Sabina.Moktan@daracon.com.au

Dear Sabina

Re: Precinct 7, Part of the BEW (DA-15-02273) &
Precinct 7, Stage 7F Civil Works (SPP-17-00046)
Bulk Earthworks Completion, Compliance Certificate

Geotech Testing Pty Ltd has provided site supervision and compaction control testing during placement of fill at the above project.

Land Filling and Compaction
Site supervision and compaction control tests were undertaken within the terms of our NATA accreditation at the dates and to the procedures shown on the test results sheets, copies of which were submitted monthly during the duration of the project.

The following 139 tests were conducted during placement of fill from November 2017 to November 2023 and the testing results were submitted as shown below:

Report	Test Nos	No of tests
8599/1-R10	3368-3376, 3419-3426, 3624-3635, 3651-3653, 3656-3669, 3702-3703, 3706-3709	68
8599/1-R15	5881-5882, 5915-5916	
8599/1-R16	5922, 5941-5942, 5955, 5967-5970, 5989-5992	
8599-84	1 to 59	59
8599-115	1 to 12	12

The frequency of field density and compaction tests were carried out in accordance with Level 1 as defined in AS3798 “Guidelines on Earthworks for Commercial & Residential Development”. Based on the foregoing, it is considered that the fill placed at the above project is classified as "CONTROLLED FILL” and that the specified compaction level has been achieved within the lots and road reserves.

Salinity Certification
All site works were carried out in accordance with the Soil Management Plan included in Geotechnique Pty Ltd Land Capability Study Report (Our Ref: 12576/1-AA dated 27 February 2012). The salinity of the imported fill was confirmed as non to slightly saline soils, thus reducing the overall effect of any saline soils on ground concrete structures such as footings. Based on the foregoing, it is our opinion that the works completed at Precincts 7C comply with the salinity report.

Validation of Imported Fill
All imported fill, if any, have been assessed as VENM as per Geotech Testing Report 9599/61-AC dated 25 March 2022. Based on the foregoing, it is our opinion that the site is validated in accordance with the Environment Protection Authority guidelines *(Contaminated Land Sites)*. No contaminants were encountered during bulk earthworks, other than that noted in the RAP report.

Newpark Precinct 7F is suitable for the intended land use consistent with NEPM 2013 Residential A - Residential with Garden / Accessible soil.

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully
GEOTECH TESTING PTY LTD

EMGED RIZKALLA
Director

Attached 8599/1-R10, R15 & R16
8599/84-FDT1 to 59 & associated drawings
8599/115-FDT1 to 12 & associated drawings

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

Our Ref: 8599/1-R10
27 November 2017

Daracon Contractors Pty Ltd
P O Box 6145
SILVERWATER BC NSW 1811
Email: SimpsonW@daracon.com.au

Attention: Mr S Wong

Dear Sir

Re: **Woorong Bulk Earthworks**
Marsden Park
Monthly Site Filling Certificate - November 2017

For the production period 10 October to 10 November 2017 inclusive, we submit our Geotech Monthly Report for the above project.

During the foregoing testing period, a total of six hundred & thirty compaction control tests (Tests 3246 to 3875 inclusive) were carried out and reported. The locations of the 630 tests are shown on the attached Drawing Nos 8599/1-56 to 8599/1-64, inclusive (9 drawings). All tests have been undertaken in accordance with the Test Methods and Specifications shown on the attached certificates. Scanned daily records and subgrade reports are also attached.

Based on the fill quantities/survey data, the frequency of field density and compaction tests was in accordance with Level 1 as defined in AS3798 “Guidelines on Earthworks for Commercial & Residential Development”. We certify that all tested locations attained the density ratio shown on the test results sheets. Where failures were encountered, the areas were re-worked and re-tested to achieve the specified density ratio.

Based on site observations and testing, it is considered that the fill placed to date at the locations shown on the attached drawings is classified as "Controlled" fill and that the specified compaction level has been achieved within the tested area.

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully
GEOTECH TESTING PTY LTD

EMGED RIZKALLA
Director

Attached Density Test Results Certificates Tests 3246 to 3875
Test Location Drawings 8599/1-56 to 8599/1-64
Daily Records
Subgrade Approvals (S16 to S19)

Head Office:
34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744 Facsimile: (02) 4722 2777
e-mail: info@geotech.com.au www.geotech.com.au

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3246	3247	3248	3249	3250	3251	3252	3253
DATE TESTED			10/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	100	99.5	98	98.5	98	97	100	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**-0.5**	**-0.5**	**0.5**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295261.341	295237.966	295243.232	295247.341	295234.783	295236.615	295233.835	295252.502
Northing			6268935.461	6268949.704	6268984.437	6269014.11	6269012.589	6268977.182	6268944.871	6268935.995
Reduced Level		m	17.621	17.213	17.113	17.001	17.061	17.212	17.586	17.816
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.09	2.06	2.08	2.05	2.05	2.09	2.07
Field Moisture Content		%	21.5	20.0	20.5	20.5	22.0	22.0	22.0	21.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3246	3247	3248	3249	3250	3251	3252	3253
Peak Converted Wet Density		t/m³	2.09	2.10	2.10	2.11	2.09	2.11	2.09	2.11
Apparent Optimum Moisture Content		%	21.5	20.0	20.5	21.0	22.5	21.5	22.0	20.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			3	2-3	2-3	2-3	3	3	3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3254	3255	3256	3257	3258	3259	3260	3261
DATE TESTED			10/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	100.5	100.5	98.5	98.5	99	97	97.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**-0.5**	**-1.0**	**-0.5**	**0.0**	**-0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295260.032	295272.444	295264.093	295237.297	295217.843	295241.795	295258.659	295245.187
Northing			6268961.635	6269001.367	6269016.529	6268987.254	6268949.792	6268941.543	6268983.401	6269011.448
Reduced Level		m	17.641	17.621	17.721	17.533	17.581	18.181	18.034	17.763
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.11	2.10	2.07	2.08	2.08	2.04	2.07
Field Moisture Content		%	22.0	21.5	21.0	20.5	21.0	21.5	22.0	22.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3254	3255	3256	3257	3258	3259	3260	3261
Peak Converted Wet Density		t/m³	2.11	2.10	2.09	2.10	2.11	2.10	2.10	2.12
Apparent Optimum Moisture Content		%	22.5	22.0	21.5	20.5	21.5	21.5	22.0	22.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			3	3	3	2-3	3	3	3	3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3262	3263	3264	3265	3266	3267	3268	3269
DATE TESTED			10/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	99.5	100	98	98.5	97.5	98.5	99.5	98.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.5**	**0.5**	**-0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295233.613	295219.002	295243.597	295260.006	295303.055	295262.556	295218.774	295211.423
Northing			6268990.457	6268948.32	6268948.814	6268987.693	6269001.958	6269001.354	6269008.56	6268992.77
Reduced Level		m	18.073	18.167	18.378	18.283	19.228	18.636	18.07	18.099
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.12	2.08	2.06	2.05	2.06	2.08	2.08
Field Moisture Content		%	21.5	20.5	22.5	21.5	16.5	19.5	19.5	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3262	3263	3264	3265	3266	3267	3268	3269
Peak Converted Wet Density		t/m³	2.12	2.12	2.12	2.09	2.10	2.09	2.09	2.11
Apparent Optimum Moisture Content		%	21.0	20.0	22.0	22.0	16.5	19.5	19.5	20.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	3	3	2	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3270	3271	3272	3273	3274	3275	3276	3277
DATE TESTED			10/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	99.5	98.5	98.5	99.5	99.5	99	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**-0.5**	**-0.5**	**0.0**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295271.349	295288.261	295246.467	295211.439	295209.889	295261.127	295487.598	295514.537
Northing			6268979.656	6268958.507	6268958.527	6268962.755	6268940.304	6268930.464	6269508.534	6269489.444
Reduced Level		m	18.835	19.543	18.434	18.405	18.625	19.043	17.39	16.983
Shown on Drawing No			8599/1-59						8599/1-58	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.09	2.08	2.07	2.10	2.09	2.08	2.07
Field Moisture Content		%	22.5	22.0	21.5	22.0	21.0	20.0	21.5	21.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3270	3271	3272	3273	3274	3275	3276	3277
Peak Converted Wet Density		t/m³	2.09	2.10	2.11	2.10	2.11	2.10	2.10	2.10
Apparent Optimum Moisture Content		%	22.5	22.5	22.0	22.0	21.0	20.5	21.5	21.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			3	3	3	3	2-3	2-3	3	3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3278	3279	3280	3281	3282	3283	3284	3285
DATE TESTED			10/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97.5	97	99	100.5	99.5	99	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**0.0**	**-0.5**	**-0.5**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295533.456	295515.626	295489.17	295457.9	295445.161	295488.928	295522.092	295133.317
Northing			6269470.597	6269458.138	6269476.475	6269499.962	6269483.165	6269452.506	6269430.553	6269024.101
Reduced Level		m	17.563	17.101	16.427	16.396	14.847	15.839	16.901	16.994
Shown on Drawing No			8599/1-58							8599/1-59
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.05	2.06	2.07	2.11	2.10	2.09	2.08
Field Moisture Content		%	20.5	22.0	21.0	20.0	19.0	21.5	21.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3278	3279	3280	3281	3282	3283	3284	3285
Peak Converted Wet Density		t/m³	2.11	2.10	2.12	2.09	2.10	2.11	2.11	2.11
Apparent Optimum Moisture Content		%	20.5	22.0	21.0	20.5	19.5	21.5	21.5	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	3	2-3	2-3	2-3	3	3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3286	3287	3288	3289	3290	3291	3292	3293
DATE TESTED			10/10/2017	11/10/2017						
RESULTS										
Hilf Density Ratio	Standard	%	100	96	97	97.5	98	96	95.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295095.465	295055.886	295092.907	295122.608	295125.53	295054.373	295048.705	295111.492
Northing			6269026.582	6269013.147	6269007.546	6269003.308	6268991.312	6268994.761	6268978.48	6268964.952
Reduced Level		m	15.944	15.512	16.449	17.254	17.282	15.945	15.916	17.337
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.04	2.06	2.08	2.10	2.05	2.03	2.08
Field Moisture Content		%	21.0	20.0	21.5	21.5	21.0	21.5	20.5	21.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3286	3287	3288	3289	3290	3291	3292	3293
Peak Converted Wet Density		t/m³	2.11	2.13	2.12	2.13	2.14	2.14	2.13	2.13
Apparent Optimum Moisture Content		%	21.0	20.0	21.0	22.0	21.0	21.5	20.5	21.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	3	3	2-3	3	2-3	3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3294	3295	3296	3297	3298	3299	3300	3301
DATE TESTED			11/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	99	97	97.5	98	98	97	97.5	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295116.255	295052.532	295040.509	295109.607	295129.665	295080.46	295056.673	295115.91
Northing			6268940.573	6268946.756	6268963.979	6268953.273	6268965.789	6268972.43	6268991.327	6268981.781
Reduced Level		m	17.893	16.831	16.231	17.775	17.804	16.926	16.337	17.568
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.07	2.08	2.08	2.09	2.08	2.07	2.05
Field Moisture Content		%	19.5	20.0	20.5	21.0	19.5	21.0	20.5	21.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3294	3295	3296	3297	3298	3299	3300	3301
Peak Converted Wet Density		t/m³	2.13	2.13	2.13	2.12	2.13	2.14	2.12	2.13
Apparent Optimum Moisture Content		%	19.5	20.0	20.5	21.0	19.5	20.5	20.5	21.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3302	3303	3304	3305	3306	3307	3308	3309
DATE TESTED			11/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	95.5	98	98	97.5	98	96.5	98	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295122.951	295064.007	295443.563	295461.902	295500.887	295505.758	295480.681	295444.647
Northing			6269001.238	6269003.942	6269486.614	6269456.231	6269427.425	6269412.357	6269421.035	6269445.523
Reduced Level		m	17.368	16.066	15.478	15.561	16.648	16.978	16.277	15.261
Shown on Drawing No			8599/1-59		8599/1-58					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.09	2.10	2.08	2.08	2.06	2.08	2.09
Field Moisture Content		%	21.0	21.5	20.0	21.0	21.0	21.0	21.0	20.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3302	3303	3304	3305	3306	3307	3308	3309
Peak Converted Wet Density		t/m³	2.14	2.13	2.14	2.13	2.12	2.14	2.12	2.13
Apparent Optimum Moisture Content		%	21.0	21.5	20.0	20.5	21.0	21.0	21.0	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	3	2-3	2-3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3310	3311	3312	3313	3314	3315	3316	3317
DATE TESTED			11/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	98	97.5	96.5	98.5	96	96.5	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295432.32	295451.512	295489.755	295545.415	295522.321	295534.691	295560.623	295560.186
Northing			6269431.452	6269412.299	6269381.312	6269625.838	6269643.349	6269653.257	6269644.135	6269672.586
Reduced Level		m	15.109	15.801	16.387	15.056	13.836	14.034	15.014	14.728
Shown on Drawing No			8599/1-58			8599/1-57				
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.11	2.07	2.06	2.10	2.04	2.06	2.05
Field Moisture Content		%	21.0	18.0	17.5	17.0	17.0	18.0	18.5	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3310	3311	3312	3313	3314	3315	3316	3317
Peak Converted Wet Density		t/m³	2.14	2.15	2.12	2.13	2.13	2.13	2.13	2.13
Apparent Optimum Moisture Content		%	20.5	18.0	17.5	17.0	17.0	17.5	18.5	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2	2	2	2	2	2-3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3318	3319	3320	3321	3322	3323	3324	3325
DATE TESTED			11/10/2017		12/10/2017					
RESULTS										
Hilf Density Ratio	Standard	%	97.5	97.5	96.5	96.5	98.5	95.5	98	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295047.631	295085.812	295123.312	295134.457	295096.738	295054.208	295048.954	295082.092
Northing			6269023.514	6269019.769	6269017.347	6268997.955	6269004.423	6269006.923	6268989.24	6268982.007
Reduced Level		m	15.005	16.104	17.16	17.618	17.166	15.778	16.16	17.069
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.10	2.06	2.07	2.10	2.02	2.09	2.06
Field Moisture Content		%	18.0	17.5	18.5	19.0	18.5	18.0	20.0	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3318	3319	3320	3321	3322	3323	3324	3325
Peak Converted Wet Density		t/m³	2.13	2.15	2.13	2.14	2.13	2.12	2.13	2.13
Apparent Optimum Moisture Content		%	18.0	18.0	18.5	19.0	18.0	18.0	20.0	18.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2-3	2	2	2-3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3326	3327	3328	3329	3330	3331	3332	3333
DATE TESTED			12/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	96.5	96.5	97	96.5	98	96	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295125.924	295129.535	295087.511	295048.333	295046.786	295097.539	295540.234	295516.179
Northing			6268973.936	6268955.257	6268958.898	6268963.046	6268946.615	6268942.591	6269465.204	6269491.638
Reduced Level		m	17.685	18.227	17.414	16.584	16.932	17.986	18.207	17.67
Shown on Drawing No			8599/1-59						8599/1-58	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.06	2.04	2.07	2.06	2.08	2.05	2.07
Field Moisture Content		%	19.0	18.0	17.0	18.5	19.0	18.5	17.5	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3326	3327	3328	3329	3330	3331	3332	3333
Peak Converted Wet Density		t/m³	2.12	2.13	2.11	2.13	2.13	2.12	2.13	2.14
Apparent Optimum Moisture Content		%	19.0	18.0	16.5	18.5	19.5	18.5	17.5	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2	2	2	2-3	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3334	3335	3336	3337	3338	3339	3340	3341
DATE TESTED			12/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	98	98	97.5	96	95.5	99.5	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295487.16	295477.363	295505.896	295532.442	295515.34	295482.187	295450.423	295405.682
Northing			6269511.266	6269495.501	6269477.22	6269454.436	6269443.685	6269466.52	6269490.777	6269412.182
Reduced Level		m	17.457	17.549	17.643	18.167	17.797	16.893	16.398	14.538
Shown on Drawing No			8599/1-58							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.09	2.08	2.08	2.06	2.03	2.11	2.06
Field Moisture Content		%	17.0	17.0	19.5	19.0	19.0	18.5	17.0	18.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3334	3335	3336	3337	3338	3339	3340	3341
Peak Converted Wet Density		t/m³	2.13	2.13	2.12	2.13	2.15	2.13	2.12	2.13
Apparent Optimum Moisture Content		%	16.5	17.0	19.5	19.0	19.0	18.5	17.0	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2-3	2-3	2-3	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3342	3343	3344	3345	3346	3347	3348	3349
DATE TESTED			12/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96	97.5	98	97.5	97	95	96.5	99
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**-0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295442.606	295489.087	295614.95	295585.901	295649.105	295631.179	295628.874	295630.95
Northing			6269387.453	6269378.554	6269650.278	6269645.271	6269728.286	6269715.908	6269745.224	6269782.478
Reduced Level		m	16.009	16.709	16.713	16.079	16.248	16.454	15.905	15.151
Shown on Drawing No			8599/1-58		8599/1-57					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.07	2.10	2.08	2.07	2.03	2.06	2.10
Field Moisture Content		%	18.5	17.5	17.0	17.5	18.0	18.0	17.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3342	3343	3344	3345	3346	3347	3348	3349
Peak Converted Wet Density		t/m³	2.12	2.12	2.14	2.13	2.13	2.14	2.14	2.12
Apparent Optimum Moisture Content		%	19.0	18.0	17.5	17.0	18.5	18.0	17.5	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3350	3351	3352	3353	3354	3355	3356	3357
DATE TESTED			12/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	97	95	97	97	96.5	97	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-1.0**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295602.115	296419.644	296371.943	296358.977	296416.079	296421.936	296372.43	296430.726
Northing			6269759.741	6268762.877	6268758.411	6268742.274	6268750.144	6268735.222	6268726.186	6268721.647
Reduced Level		m	15.088	20.997	20.172	19.806	21.032	20.817	20.003	20.984
Shown on Drawing No			8599/1-57	8599/1-64						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.08	2.03	2.07	2.08	2.07	2.07	2.08
Field Moisture Content		%	18.5	17.5	17.0	16.0	16.0	16.0	18.5	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3350	3351	3352	3353	3354	3355	3356	3357
Peak Converted Wet Density		t/m³	2.14	2.14	2.14	2.13	2.14	2.15	2.13	2.13
Apparent Optimum Moisture Content		%	18.5	17.5	17.0	16.0	16.0	16.5	19.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2-3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3358	3359	3360	3361	3362	3363	3364	3365
DATE TESTED			12/10/2017					13/10/2017		
RESULTS										
Hilf Density Ratio	Standard	%	98.5	97	97.5	96.5	98	97	98	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296406.395	296374.437	294904.523	294875.301	294843.315	294849.254	294874.871	294902.617
Northing			6268712.038	6268699.956	6268767.041	6268772.853	6268775.386	6268755.373	6268744.513	6268729.216
Reduced Level		m	20.59	19.654	19.365	18.028	16.496	17.262	18.91	20.225
Shown on Drawing No			8599/1-64		8599/1-60					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.08	2.08	2.07	2.09	2.06	2.04	2.10
Field Moisture Content		%	17.0	16.0	17.0	16.5	17.5	20.0	19.5	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3358	3359	3360	3361	3362	3363	3364	3365
Peak Converted Wet Density		t/m³	2.13	2.14	2.13	2.15	2.13	2.12	2.08	2.14
Apparent Optimum Moisture Content		%	17.0	16.5	17.5	16.5	17.5	20.0	19.5	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3366	3367	3368	3369	3370	3371	3372	3373
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	96.5	98.5	97	96.5	96.5	97	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294883.795	294849.1	294831.096	294870.193	294896.329	294883.924	294849.707	294820.678
Northing			6268726.06	6268733.102	6268711.431	6268704.41	6268698.413	6268682.361	6268683.824	6268675.121
Reduced Level		m	19.302	17.761	17.096	19.139	20.294	19.704	18.217	17.085
Shown on Drawing No			8599/1-60		8599/1-61					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.07	2.09	2.07	2.06	2.05	2.07	2.07
Field Moisture Content		%	22.5	19.5	19.5	19.5	20.5	18.0	19.5	21.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3366	3367	3368	3369	3370	3371	3372	3373
Peak Converted Wet Density		t/m³	2.13	2.14	2.12	2.13	2.14	2.12	2.13	2.14
Apparent Optimum Moisture Content		%	22.5	19.0	19.0	19.5	20.5	17.5	19.5	21.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			3	2-3	2-3	2-3	2-3	2	2-3	3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3374	3375	3376	3377	3378	3379	3380	3381
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	96	96	3.5	96	97.5	98.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**1.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294825.483	294855.471	294895.191	294942.693	294976.956	295011.395	295067.499	294993.3
Northing			6268653.649	6268652.247	6268655.4	6268775.34	6268790.579	6268791.136	6268783.478	6268808.085
Reduced Level		m	17.561	18.527	19.945	20.497	21.413	22.376	22.578	20.775
Shown on Drawing No			8599/1-61			8599/1-60				
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.04	2.05	0.07	2.05	2.07	2.10	2.09
Field Moisture Content		%	20.0	21.5	21.5	21.5	20.0	21.0	21.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3374	3375	3376	3377	3378	3379	3380	3381
Peak Converted Wet Density		t/m³	2.13	2.13	2.14	2.12	2.13	2.12	2.13	2.14
Apparent Optimum Moisture Content		%	19.5	21.5	21.5	21.5	20.0	20.5	20.0	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	3	3	3	2-3	2-3	2-3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3382	3383	3384	3385	3386	3387	3388	3389
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	98	96.5	96.5	97	96.5	95.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295018.573	295046.395	295062.127	295026.432	294985.535	294985.949	294999.546	295013.684
Northing			6268806.322	6268812.085	6268816.465	6268828.989	6268842.085	6268843.044	6268883.08	6268919.016
Reduced Level		m	21.84	22.047	22.127	21.199	19.876	19.871	19.743	19.606
Shown on Drawing No			8599/1-60							8599/1-59
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.08	2.06	2.07	2.09	2.07	2.07	2.08
Field Moisture Content		%	19.5	20.0	17.5	18.5	18.5	19.0	18.5	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3382	3383	3384	3385	3386	3387	3388	3389
Peak Converted Wet Density		t/m³	2.13	2.12	2.13	2.14	2.15	2.15	2.17	2.12
Apparent Optimum Moisture Content		%	19.5	21.0	18.0	19.5	19.0	19.5	19.0	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			23	2-3	2	2-3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3390	3391	3392	3393	3394	3395	3396	3397
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	98	98	96	95	99.5	97.5	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295053.653	295052.099	295041.457	295125.917	295105.477	295056.975	295054.691	295084.986
Northing			6268922.75	6268904.442	6268872.412	6268942.786	6268944.63	6268947.76	6268969.774	6268969.747
Reduced Level		m	19.553	19.785	20.259	18.752	18.63	18.002	17.542	18.049
Shown on Drawing No			8599/1-60							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.10	2.11	2.07	2.06	2.11	2.08	2.05
Field Moisture Content		%	20.0	17.0	18.5	18.0	18.5	19.0	19.0	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3390	3391	3392	3393	3394	3395	3396	3397
Peak Converted Wet Density		t/m³	2.13	2.14	2.15	2.16	2.17	2.12	2.13	2.13
Apparent Optimum Moisture Content		%	20.5	17.5	19.0	18.5	19.0	19.5	19.5	19.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2	2-3	2	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3398	3399	3400	3401	3402	3403	3404	3405
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	95.5	99.5	99	2	97	95	96.5	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**-0.5**	**0.0**	**0.0**	**0.0**	**-0.5**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295107.092	295116.033	295079.702	295064.887	295103.374	295131.355	295432.489	295462.046
Northing			6268970.639	6268993.962	6268999.128	6269016.798	6269019.993	6269020.918	6269424.768	6269413.049
Reduced Level		m	18.326	18.29	17.694	16.877	17.674	17.952	16.02	16.832
Shown on Drawing No			8599/1-60	8599/1-59					8599/1-58	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.11	2.11	0.04	2.08	2.05	2.09	2.08
Field Moisture Content		%	19.0	20.5	20.5	19.5	19.0	17.0	18.0	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3398	3399	3400	3401	3402	3403	3404	3405
Peak Converted Wet Density		t/m³	2.15	2.12	2.13	2.14	2.14	2.16	2.17	2.17
Apparent Optimum Moisture Content		%	19.5	21.0	21.0	19.5	19.0	18.0	18.5	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	2-3	2-3	2	2	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3406	3407	3408	3409	3410	3411	3412	3413
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	99	97	96	95.5	96	96	98.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**-0.5**	**-0.5**	**0.0**	**-0.5**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295492.217	295503.806	295483.205	295451.776	296450.987	296416.003	296386.718	296438.593
Northing			6269395.794	6269418.529	6269433.352	6269450.058	6268713.374	6268702.831	6268693.6	6268742.712
Reduced Level		m	17.313	17.335	16.706	15.966	22.2	21.779	20.979	21.736
Shown on Drawing No			8599/1-58				8599/1-64			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.08	2.05	2.05	2.07	2.05	2.11	2.10
Field Moisture Content		%	18.5	18.5	17.5	19.0	20.0	17.0	17.5	19.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3406	3407	3408	3409	3410	3411	3412	3413
Peak Converted Wet Density		t/m³	2.11	2.14	2.14	2.15	2.16	2.13	2.14	2.15
Apparent Optimum Moisture Content		%	18.5	19.0	18.5	20.0	20.0	17.5	18.0	19.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2-3	2	2-3	2-3	2	2	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3414	3415	3416	3417	3418	3419	3420	3421
DATE TESTED			13/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97	97	95	96	97	97	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.0**	**-0.5**	**0.0**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296402.707	296361.988	296348.591	296389.564	296426.269	294815.258	294847.267	294876.667
Northing			6268733.622	6268726.313	6268750.179	6268759.762	6268767.626	6268647.39	6268650.509	6268652.352
Reduced Level		m	21.458	20.352	20.308	21.277	21.596	17.548	18.998	20.076
Shown on Drawing No			8599/1-64					8599/1-61		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.07	2.09	2.05	2.08	2.06	2.07	2.06
Field Moisture Content		%	19.0	19.0	19.0	19.5	18.5	20.5	21.0	18.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3414	3415	3416	3417	3418	3419	3420	3421
Peak Converted Wet Density		t/m³	2.15	2.13	2.15	2.16	2.17	2.12	2.13	2.14
Apparent Optimum Moisture Content		%	19.5	19.0	20.0	19.5	19.0	21.0	21.5	18.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	3	2-3	2-3	3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3422	3423	3424	3425	3426	3427	3428	3429
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	95.5	97	96	96.5	97	95	96.5	95
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.5**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294877.253	294847.325	294823.617	294826.678	294852.945	294904.982	294892.627	294868.309
Northing			6268682.702	6268684.557	6268689.44	6268720.636	6268722.747	6268720.248	6268751.835	6268763.377
Reduced Level		m	19.919	18.719	17.422	17.104	18.8	20.43	19.861	18.599
Shown on Drawing No			8599/1-61						8599/1-60	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.09	2.06	2.08	2.06	2.05	2.07	2.05
Field Moisture Content		%	20.0	17.5	20.0	19.5	19.0	20.0	18.5	19.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3422	3423	3424	3425	3426	3427	3428	3429
Peak Converted Wet Density		t/m³	2.17	2.15	2.15	2.15	2.12	2.16	2.15	2.16
Apparent Optimum Moisture Content		%	20.0	17.5	19.5	19.0	18.5	20.0	18.0	18.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2	2-3	2-3	2	2-3	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3430	3431	3432	3433	3434	3435	3436	3437
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	96	97	95	96.5	95.5	96.5	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.0**	**0.0**	**0.0**	**-0.5**	**0.5**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294841.494	295135.08	295091.198	295061.54	295050.925	295081.748	295104.922	295122.962
Northing			6268774.488	6268942.396	6268947.066	6268947.01	6268966.378	6268966.06	6268965.879	6268999.655
Reduced Level		m	16.8	19.197	19.277	18.949	18.255	19.034	19.189	18.444
Shown on Drawing No			8599/1-60							8599/1-59
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.07	2.09	2.05	2.08	2.06	2.07	2.07
Field Moisture Content		%	17.0	18.5	18.5	18.0	17.5	19.5	17.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3430	3431	3432	3433	3434	3435	3436	3437
Peak Converted Wet Density		t/m³	2.16	2.16	2.15	2.16	2.15	2.16	2.15	2.15
Apparent Optimum Moisture Content		%	17.5	18.0	18.0	18.0	18.0	19.0	17.0	19.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2-3	2	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3438	3439	3440	3441	3442	3443	3444	3445
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	96	95	95.5	95.5	95	96.5	95.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-6.0**	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295089.024	295089.024	295061.332	295579.151	295558.485	295534.047	295524.653	295498.11
Northing			6269011.107	6269011.109	6269016.936	6269540.945	6269508.399	6269461.661	6269442.308	6269443.731
Reduced Level		m	18.271	18.269	17.788	18.599	18.485	18.559	18.43	17.581
Shown on Drawing No			8599/1-59			8599/1-58				
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.05	2.05	2.04	2.05	2.06	2.05
Field Moisture Content		%	17.0	16.5	19.0	19.5	18.0	18.5	18.5	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3438	3439	3440	3441	3442	3443	3444	3445
Peak Converted Wet Density		t/m³	2.14	2.15	2.16	2.15	2.14	2.16	2.14	2.15
Apparent Optimum Moisture Content		%	16.5	22.5	18.0	19.5	18.0	18.5	18.5	18.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2-3	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3446	3447	3448	3449	3450	3451	3452	3453
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	95.5	96.5	96	96.5	96.5	95.5	96.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**-0.5**	**0.5**	**1.0**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295515.698	295536.321	295562.565	295520.381	295499.403	295472.21	295449.929	295454.113
Northing			6269479.206	6269511.182	6269548.306	6269523.583	6269504.501	6269474.683	6269476.802	6269515.756
Reduced Level		m	18.07	17.985	18.225	18.053	17.779	17.187	16.502	16.34
Shown on Drawing No			8599/1-58							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.07	2.07	2.06	2.07	2.05	2.06	2.08
Field Moisture Content		%	16.0	17.5	17.5	16.5	16.0	16.0	19.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3446	3447	3448	3449	3450	3451	3452	3453
Peak Converted Wet Density		t/m³	2.14	2.15	2.16	2.14	2.14	2.15	2.14	2.14
Apparent Optimum Moisture Content		%	16.0	18.0	17.0	15.5	15.5	15.5	19.5	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3454	3455	3456	3457	3458	3459	3460	3461
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	96.5	96	97.5	96.5	96	95.5	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295583.213	295542.311	295506.436	295486.341	295485.21	295506.601	295541.013	295567.365
Northing			6269660.759	6269618.119	6269576.128	6269547.793	6269568.254	6269597.086	6269634.235	6269664.437
Reduced Level		m	15.777	15.665	15.642	15.604	15.552	15.742	15.481	15.633
Shown on Drawing No			8599/1-57		8599/1-58			8599/1-57		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.07	2.06	2.09	2.07	2.05	2.05	2.07
Field Moisture Content		%	19.0	16.5	17.5	19.5	17.0	19.0	20.0	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3454	3455	3456	3457	3458	3459	3460	3461
Peak Converted Wet Density		t/m³	2.15	2.15	2.15	2.14	2.14	2.14	2.15	2.15
Apparent Optimum Moisture Content		%	18.5	16.5	17.5	19.0	17.0	18.5	19.5	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2-3	2	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3462	3463	3464	3465	3466	3467	3468	3469
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96	98.5	98	96	98	97	97.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295438.703	295431.645	295424.292	295446.959	295461.885	295475.52	295499.044	295497.856
Northing			6269467.32	6269445.357	6269424.76	6269406.062	6269418.131	6269433.178	6269423.278	6269404.767
Reduced Level		m	15.089	15.336	15.805	16.726	16.806	16.655	17.169	17.222
Shown on Drawing No			8599/1-58							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.10	2.09	2.05	2.08	2.07	2.08	2.08
Field Moisture Content		%	17.0	17.5	11.5	16.5	17.0	17.0	17.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3462	3463	3464	3465	3466	3467	3468	3469
Peak Converted Wet Density		t/m³	2.14	2.13	2.13	2.14	2.12	2.13	2.13	2.12
Apparent Optimum Moisture Content		%	16.5	16.5	11.0	16.5	16.5	17.0	17.0	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3470	3471	3472	3473	3474	3475	3476	3477
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	98	98	98.5	97	97	99	99.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295486.428	295407.485	295418.134	295446.618	296439.669	296395.455	296356.481	296355.67
Northing			6269385.112	6269416.278	6269397.126	6269383.995	6268763.93	6268760.071	6268753.421	6268728.536
Reduced Level		m	17.295	14.573	15.366	15.897	22.102	21.689	20.856	21.155
Shown on Drawing No			8599/1-58				8599/1-64			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.08	2.09	2.08	2.07	2.07	2.10	2.10
Field Moisture Content		%	16.5	16.5	15.5	19.0	16.5	17.0	16.5	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3470	3471	3472	3473	3474	3475	3476	3477
Peak Converted Wet Density		t/m³	2.13	2.12	2.13	2.11	2.13	2.13	2.12	2.11
Apparent Optimum Moisture Content		%	16.5	16.5	15.5	19.0	16.5	17.0	16.5	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2-3	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3478	3479	3480	3481	3482	3483	3484	3485
DATE TESTED			16/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	96.5	97	97.5	96.5	98	98.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296395.69	296440.435	296452.211	296420.351	296391.254	294839.258	294846.929	294851.862
Northing			6268732.316	6268739.018	6268716.956	6268707.883	6268698.484	6268809.163	6268862.322	6268901.508
Reduced Level		m	21.916	22.107	22.532	22.221	21.575	15.922	15.3	14.977
Shown on Drawing No			8599/1-64					8599/1-60		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.05	2.05	2.07	2.04	2.09	2.08	2.08
Field Moisture Content		%	16.5	17.0	16.5	17.0	17.0	17.0	17.0	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3478	3479	3480	3481	3482	3483	3484	3485
Peak Converted Wet Density		t/m³	2.11	2.12	2.11	2.12	2.11	2.13	2.11	2.13
Apparent Optimum Moisture Content		%	16.5	17.0	16.5	17.0	16.5	17.0	17.0	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3486	3487	3488	3489	3490	3491	3492	3493
DATE TESTED			17/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	98	96	99.5	96.5	98	97.5	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.5**	**0.5**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294857.488	294880.098	294882.76	294880.007	294877.925	294895.812	294900.603	294902.281
Northing			6268942.142	6268948.014	6268917.473	6268881.875	6268831.81	6268818.789	6268874.416	6268913.265
Reduced Level		m	14.697	14.549	14.851	15.128	16.008	16.769	15.285	14.83
Shown on Drawing No			8599/1-60							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.07	2.05	2.10	2.07	2.07	2.05	2.08
Field Moisture Content		%	17.0	17.0	17.5	16.5	17.0	17.0	17.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3486	3487	3488	3489	3490	3491	3492	3493
Peak Converted Wet Density		t/m³	2.13	2.11	2.13	2.11	2.14	2.11	2.10	2.11
Apparent Optimum Moisture Content		%	16.5	16.5	17.5	16.5	16.5	16.5	17.0	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3494	3495	3496	3497	3498	3499	3500	3501
DATE TESTED			17/10/2017			18/10/2017				
RESULTS										
Hilf Density Ratio	Standard	%	98	96.5	96.5	98	98.5	99.5	97.5	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294904.607	294839.241	294845.428	294850.906	294859.899	294892.419	294891.435	294887.332
Northing			6268942.164	6268778.259	6268828.933	6268872.881	6268942.044	6268951.593	6268899.092	6268863.863
Reduced Level		m	14.449	16.74	16.132	15.579	15.105	14.885	15.475	16.067
Shown on Drawing No			8599/1-60	8599/1-61	8599/1-60					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.06	2.06	2.07	2.07	2.09	2.05	2.07
Field Moisture Content		%	17.0	18.5	17.5	18.5	17.5	18.5	18.0	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3494	3495	3496	3497	3498	3499	3500	3501
Peak Converted Wet Density		t/m³	2.12	2.13	2.13	2.11	2.10	2.10	2.10	2.10
Apparent Optimum Moisture Content		%	17.0	18.0	17.5	18.0	17.5	18.5	17.5	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3502	3503	3504	3505	3506	3507	3508	3509
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	99.5	97.5	99	97.5	99.5	98	99	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.5**	**0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294879.7	294860.196	294866.666	294873.784	294877.169	294911.527	294907.72	294898.437
Northing			6268810.415	6268789.491	6268845.372	6268901.761	6268946.456	6268948.005	6268908.584	6268846.448
Reduced Level		m	17.009	17.277	16.097	15.606	15.024	14.787	15.248	16.485
Shown on Drawing No			8599/1-61		8599/1-60					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.05	2.07	2.06	2.07	2.06	2.09	2.07
Field Moisture Content		%	17.5	17.0	17.5	17.0	17.0	17.5	16.5	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3502	3503	3504	3505	3506	3507	3508	3509
Peak Converted Wet Density		t/m³	2.10	2.10	2.09	2.11	2.08	2.10	2.11	2.10
Apparent Optimum Moisture Content		%	18.5	16.5	17.0	16.5	17.0	17.5	16.5	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3510	3511	3512	3513	3514	3515	3516	3517
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	98	98.5	98.5	97	96.5	96.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294920.615	294924.277	294927.548	294932.046	294950.939	294949.592	294937.722	295853.89
Northing			6268826.048	6268867.198	6268899.363	6268933.823	6268939.985	6268906.891	6268833.723	6268628.325
Reduced Level		m	17.405	16.011	15.557	14.973	15.16	15.619	17.378	18.839
Shown on Drawing No			8599/1-61	8599/1-60						8599/1-63
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.08	2.08	2.06	2.05	2.05	2.07
Field Moisture Content		%	17.5	15.0	17.5	16.5	16.5	18.0	16.0	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3510	3511	3512	3513	3514	3515	3516	3517
Peak Converted Wet Density		t/m³	2.13	2.10	2.11	2.11	2.12	2.12	2.12	2.11
Apparent Optimum Moisture Content		%	17.5	15.0	17.5	16.5	16.5	18.0	16.0	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3518	3519	3520	3521	3522	3523	3524	3525
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	97	97	97	98	96.5	96.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295860.229	295866.093	295881.462	295908.739	295906.253	295892.388	295889.77	295908.324
Northing			6268578.962	6268549.634	6268505.29	6268476.611	6268518.621	6268576.881	6268634.271	6268619.415
Reduced Level		m	18.978	18.836	19.054	19.686	20	19.282	18.889	19.27
Shown on Drawing No			8599/1-63							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.06	2.06	2.07	2.07	2.05	2.06	2.07
Field Moisture Content		%	17.0	17.5	17.0	16.5	17.0	18.0	17.5	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3518	3519	3520	3521	3522	3523	3524	3525
Peak Converted Wet Density		t/m³	2.11	2.12	2.12	2.13	2.11	2.12	2.13	2.11
Apparent Optimum Moisture Content		%	17.0	17.0	17.0	16.0	16.5	18.0	17.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3526	3527	3528	3529	3530	3531	3532	3533
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	99.5	97.5	96	97.5	96	98	97.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295915.403	295917.097	295956.345	295958.426	295980.73	295995.174	296077.344	296108.584
Northing			6268577.504	6268540.293	6268595.164	6268623.797	6268640.948	6268614.739	6268688.031	6268691.719
Reduced Level		m	19.712	20.011	20.347	20.149	20.62	21.478	22.039	21.787
Shown on Drawing No			8599/1-63							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.07	2.05	2.06	2.05	2.08	2.06	2.07
Field Moisture Content		%	15.5	16.0	17.0	15.5	17.5	18.0	18.0	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3526	3527	3528	3529	3530	3531	3532	3533
Peak Converted Wet Density		t/m³	2.11	2.12	2.13	2.11	2.13	2.12	2.11	2.13
Apparent Optimum Moisture Content		%	15.0	16.0	17.0	15.5	17.0	18.0	18.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3534	3535	3536	3537	3538	3539	3540	3541
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	98	99	97	97	97	96.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296170.414	296170.421	296170.424	296224.115	296202.938	296166.186	296188.097	296195.771
Northing			6268697.458	6268697.462	6268697.457	6268721.181	6268768.909	6268777.019	6268742.202	6268722.413
Reduced Level		m	20.863	20.87	20.856	18.866	18.263	18.279	18.949	19.217
Shown on Drawing No			8599/1-63			8599/1-64				8599/1-63
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.09	2.10	2.05	2.07	2.07	2.05	2.07
Field Moisture Content		%	16.0	16.5	16.5	15.5	17.0	15.5	16.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3534	3535	3536	3537	3538	3539	3540	3541
Peak Converted Wet Density		t/m³	2.12	2.13	2.12	2.11	2.13	2.13	2.12	2.11
Apparent Optimum Moisture Content		%	15.5	16.5	16.5	15.5	16.5	15.5	15.5	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3542	3543	3544	3545	3546	3547	3548	3549
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	96	96.5	96.5	97.5	97.5	97	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.5**	**1.0**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296131.161	296079.853	296079.879	296113.333	296111.662	296085.666	296086.044	296123.525
Northing			6268707.28	6268710.321	6268657.784	6268658.955	6268644.478	6268637.555	6268612.509	6268608.809
Reduced Level		m	21.109	21.436	22.3	22.372	22.642	22.619	22.664	22.838
Shown on Drawing No			8599/1-64	8599/1-63						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.05	2.06	2.05	2.08	2.06	2.07	2.07
Field Moisture Content		%	16.0	16.5	16.5	16.5	16.5	16.5	17.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3542	3543	3544	3545	3546	3547	3548	3549
Peak Converted Wet Density		t/m³	2.11	2.13	2.13	2.12	2.13	2.11	2.13	2.11
Apparent Optimum Moisture Content		%	16.0	16.5	16.5	16.0	16.5	16.0	17.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3550	3551	3552	3553	3554	3555	3556	3557
DATE TESTED			18/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	97.5	99	98	97.5	97	97	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296027.152	295983.288	295944.013	295938.181	295977.789	296016.245	296016.821	295971.714
Northing			6268685.319	6268682.345	6268677.132	6268698.783	6268701.302	6268701.423	6268719.034	6268723.843
Reduced Level		m	21.902	20.817	19.439	19.305	20.467	21.51	21.111	19.964
Shown on Drawing No			8599/1-63							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.08	2.08	2.07	2.08	2.05	2.07	2.07
Field Moisture Content		%	16.0	17.0	16.5	16.0	16.0	16.0	15.5	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3550	3551	3552	3553	3554	3555	3556	3557
Peak Converted Wet Density		t/m³	2.12	2.13	2.10	2.11	2.13	2.11	2.13	2.11
Apparent Optimum Moisture Content		%	16.0	17.0	16.5	15.5	16.0	16.0	15.5	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3558	3559	3560	3561	3562	3563	3564	3565
DATE TESTED			18/10/2017			19/10/2017				
RESULTS										
Hilf Density Ratio	Standard	%	99	98	97.5	98.5	98	99	97	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-1.0**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295934.904	296442.084	296414.198	296384.591	296349.905	296367.331	296392.377	296421.913
Northing			6268723.846	6268771.16	6268766.614	6268761.384	6268754.111	6268724.973	6268732.913	6268740.75
Reduced Level		m	18.952	22.468	22.313	21.955	21.142	21.822	22.612	22.893
Shown on Drawing No			8599/1-63	8599/1-64						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.08	2.08	2.07	2.06	2.08	2.05	2.08
Field Moisture Content		%	16.5	16.5	17.0	16.0	17.0	16.0	16.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3558	3559	3560	3561	3562	3563	3564	3565
Peak Converted Wet Density		t/m³	2.10	2.12	2.13	2.10	2.10	2.10	2.11	2.13
Apparent Optimum Moisture Content		%	16.5	16.5	16.5	16.0	16.5	16.5	16.5	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3566	3567	3568	3569	3570	3571	3572	3573
DATE TESTED			19/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	99.5	99	97.5	99	98.5	97.5	98	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**-0.5**	**0.0**	**-0.5**	**0.5**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296448.136	296454.9	296428.718	296402.093	296373.844	296394.033	296412.477	296438.795
Northing			6268747.93	6268728.518	6268721.715	6268716.923	6268709.988	6268689.351	6268695.735	6268702.864
Reduced Level		m	23.087	23.681	23.518	22.865	22.152	22.773	23.253	23.829
Shown on Drawing No			8599/1-64							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.08	2.06	2.08	2.08	2.06	2.06	2.05
Field Moisture Content		%	15.5	16.5	16.0	15.0	#NUM!	16.5	#NUM!	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3566	3567	3568	3569	3570	3571	3572	3573
Peak Converted Wet Density		t/m³	2.10	2.10	2.11	2.10	2.11	2.11	2.10	2.12
Apparent Optimum Moisture Content		%	15.0	16.5	16.0	15.0	#NUM!	16.5	#NUM!	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3574	3575	3576	3577	3578	3579	3580	3581
DATE TESTED			19/10/2017					24/10/2017		
RESULTS										
Hilf Density Ratio	Standard	%	99.5	98	98	97	98.5	96.5	97	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**0.0**	**0.0**	**-0.5**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296467.679	296499.183	296524.326	294842.583	294849.77	294858.017	294870.462	294891.34
Northing			6268710.554	6268721.646	6268727.049	6268820.585	6268852.555	6268892.436	6268940.783	6268949.686
Reduced Level		m	24.078	24.364	24.411	16.934	16.972	16.76	16.488	16.227
Shown on Drawing No			8599/1-64			8599/1-61	8599/1-60			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.05	2.06	2.05	2.07	2.06	2.07	2.07
Field Moisture Content		%	15.5	16.0	16.0	16.0	17.0	20.0	19.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3574	3575	3576	3577	3578	3579	3580	3581
Peak Converted Wet Density		t/m³	2.10	2.09	2.10	2.11	2.10	2.14	2.13	2.14
Apparent Optimum Moisture Content		%	15.5	16.0	16.0	16.0	17.5	19.5	19.5	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3582	3583	3584	3585	3586	3587	3588	3589
DATE TESTED			24/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	95.5	97.5	97.5	96.5	97.5	97.5	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.0**	**0.0**	**0.5**	**0.5**	**-0.5**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294889.093	294876.755	294866.003	294895.427	294905.554	294916.617	294927.172	294951.713
Northing			6268915.206	6268874.205	6268834.981	6268822.105	6268853.485	6268884.652	6268931.183	6268935.711
Reduced Level		m	16.523	16.857	17.216	17.578	17.265	16.908	16.174	16.238
Shown on Drawing No			8599/1-60			8599/1-61	8599/1-60			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.05	2.06	2.08	2.07	2.08	2.08	2.09
Field Moisture Content		%	20.5	20.5	20.5	20.0	19.0	20.0	20.0	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3582	3583	3584	3585	3586	3587	3588	3589
Peak Converted Wet Density		t/m³	2.12	2.15	2.11	2.13	2.14	2.13	2.13	2.12
Apparent Optimum Moisture Content		%	20.5	20.5	20.5	19.5	18.5	20.0	20.0	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			3	2-3	2-3	2-3	2	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3590	3591	3592	3593	3594	3595	3596	3597
DATE TESTED			24/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	96	97	97	97.5	95.5	96.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**1.0**	**0.0**	**0.5**	**-0.5**	**0.0**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294942.801	294931.104	294916.818	294935.743	294958.446	294979.746	294993.024	295250.98
Northing			6268894.403	6268863.08	6268819.392	6268816.552	6268854.309	6268901.911	6268930.569	6269120.431
Reduced Level		m	16.839	17.151	17.825	18.328	17.354	16.65	16.239	15.085
Shown on Drawing No			8599/1-60		8599/1-61			8599/1-60		8599/1-59
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.05	2.08	2.07	2.09	2.05	2.06	2.08
Field Moisture Content		%	20.0	20.0	20.0	19.5	20.0	19.5	20.0	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3590	3591	3592	3593	3594	3595	3596	3597
Peak Converted Wet Density		t/m³	2.12	2.14	2.14	2.13	2.14	2.15	2.13	2.14
Apparent Optimum Moisture Content		%	19.0	20.5	19.5	20.0	20.5	19.5	20.0	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3598	3599	3600	3601	3602	3603	3604	3605
DATE TESTED			24/10/2017	25/10/2017						
RESULTS										
Hilf Density Ratio	Standard	%	98	97	97	97	96.5	95	98	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295272.168	295298.28	295326.533	295313.983	295287.84	295250.926	295218.821	295201.442
Northing			6269118.105	6269112.981	6269108.188	6269089.739	6269091.61	6269095.9	6269100.083	6269084.485
Reduced Level		m	15.893	17.004	17.817	18.139	17.723	16.922	15.891	15.772
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.06	2.07	2.08	2.08	2.05	2.06	2.05
Field Moisture Content		%	20.0	20.0	19.5	19.0	18.5	20.5	19.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3598	3599	3600	3601	3602	3603	3604	3605
Peak Converted Wet Density		t/m³	2.12	2.12	2.13	2.14	2.15	2.16	2.10	2.12
Apparent Optimum Moisture Content		%	20.0	20.5	20.0	20.0	19.5	21.0	20.0	20.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	2-3	2	3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3606	3607	3608	3609	3610	3611	3612	3613
DATE TESTED			25/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	96.5	98	96.5	95.5	97.5	97	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**-0.5**	**0.0**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295224.035	295238.442	295278.123	295282.981	295277.531	295251.586	295246.438	295246.414
Northing			6269077.572	6269074.431	6269066.397	6269043.225	6269026.082	6269026.511	6269042.847	6269076.94
Reduced Level		m	16.538	17.023	17.644	18.028	18.407	18.318	17.685	16.935
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.07	2.07	2.07	2.06	2.06	2.06	2.07
Field Moisture Content		%	20.0	20.0	20.0	19.5	20.0	20.5	19.5	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3606	3607	3608	3609	3610	3611	3612	3613
Peak Converted Wet Density		t/m³	2.13	2.14	2.11	2.15	2.16	2.11	2.12	2.13
Apparent Optimum Moisture Content		%	20.5	21.0	20.0	20.0	20.5	21.0	20.5	20.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	3	2-3	2-3	2-3	3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3614	3615	3616	3617	3618	3619	3620	3621
DATE TESTED			25/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	97	97	98.5	96.5	97	97	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.0**	**0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295293.506	295298.993	295266.008	295218.574	295193.811	295179.254	295178.804	295213.983
Northing			6269071.118	6269050.88	6269054.547	6269061.859	6269068.362	6269077.534	6269049.222	6269040.302
Reduced Level		m	17.581	17.823	17.134	17.23	16.906	15.868	17.769	17.708
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.07	2.07	2.08	2.07	2.05	2.06	2.08
Field Moisture Content		%	20.0	20.0	18.5	19.5	19.5	19.0	18.5	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3614	3615	3616	3617	3618	3619	3620	3621
Peak Converted Wet Density		t/m³	2.12	2.13	2.13	2.11	2.14	2.11	2.12	2.16
Apparent Optimum Moisture Content		%	19.5	20.0	18.5	19.0	20.0	19.5	19.5	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2	3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3622	3623	3624	3625	3626	3627	3628	3629
DATE TESTED			25/10/2017				26/10/2017			
RESULTS										
Hilf Density Ratio	Standard	%	97	96	96.5	98	98	97	97.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295241.622	295286.445	294924.797	294890.804	294855.713	294824.545	294820.445	294851.807
Northing			6269034.295	6269024.972	6268655.073	6268653.362	6268651.001	6268647.86	6268670.116	6268675.21
Reduced Level		m	17.784	18.219	21.167	20.496	19.748	18.455	18.591	19.777
Shown on Drawing No			8599/1-59		8599/1-61					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.05	2.05	2.06	2.08	2.06	2.06	2.09
Field Moisture Content		%	20.0	19.5	20.0	19.5	18.5	19.0	19.5	19.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3622	3623	3624	3625	3626	3627	3628	3629
Peak Converted Wet Density		t/m³	2.13	2.14	2.12	2.10	2.12	2.12	2.11	2.13
Apparent Optimum Moisture Content		%	20.0	19.5	20.0	19.0	18.5	19.0	19.0	19.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	2-3	2	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3630	3631	3632	3633	3634	3635	3636	3637
DATE TESTED			26/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97.5	98	96	97.5	97	97	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294883.734	294914.153	294919.218	294886.168	294857.672	294835.064	294839.445	294867.302
Northing			6268677.548	6268679.607	6268707.146	6268714.061	6268714.414	6268716.682	6268740.695	6268743.585
Reduced Level		m	20.489	20.923	20.935	20.208	19.388	18.534	18.117	19.399
Shown on Drawing No			8599/1-61							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.06	2.08	2.05	2.07	2.07	2.05	2.08
Field Moisture Content		%	18.5	20.0	19.0	19.0	15.5	16.0	16.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3630	3631	3632	3633	3634	3635	3636	3637
Peak Converted Wet Density		t/m³	2.12	2.11	2.12	2.14	2.12	2.13	2.11	2.13
Apparent Optimum Moisture Content		%	18.0	19.5	19.0	19.0	15.5	15.5	15.5	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2-3	2-3	2-3	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3638	3639	3640	3641	3642	3643	3644	3645
DATE TESTED			26/10/2017						30/10/2017	
RESULTS										
Hilf Density Ratio	Standard	%	98	96.5	98	96.5	97.5	97.5	97	97
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294910.043	294906.564	294871.656	294848.775	295555.375	295499.739	295499.182	295534.159
Northing			6268739.838	6268763.239	6268767.776	6268773.934	6269498.782	6269517.758	6269488.756	6269460.202
Reduced Level		m	20.228	19.668	18.734	17.601	18.507	17.563	17.848	18.549
Shown on Drawing No			8599/1-61				8599/1-58			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.08	2.06	2.08	2.06	2.08	2.08
Field Moisture Content		%	16.5	16.0	17.0	16.0	19.0	20.0	15.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3638	3639	3640	3641	3642	3643	3644	3645
Peak Converted Wet Density		t/m³	2.11	2.13	2.12	2.13	2.13	2.11	2.14	2.14
Apparent Optimum Moisture Content		%	16.0	16.0	17.0	16.0	19.0	20.0	15.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2-3	2-3	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3646	3647	3648	3649	3650	3651	3652	3653
DATE TESTED			30/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	96.5	96.5	96.5	95.5	97.5	99	95.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**-0.5**	**0.0**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295505.855	295453.52	295455.817	295507.028	294839.756	294831.997	294821.064	294847.057
Northing			6269459.152	6269492.004	6269467.06	6269433.103	6268765.409	6268720.563	6268674.149	6268686.67
Reduced Level		m	18.155	16.809	16.493	17.978	18.517	19.444	18.996	19.817
Shown on Drawing No			8599/1-58				8599/1-61			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.07	2.06	2.05	2.04	2.09	2.11	2.04
Field Moisture Content		%	15.0	14.5	13.0	14.0	14.0	14.0	13.0	14.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3646	3647	3648	3649	3650	3651	3652	3653
Peak Converted Wet Density		t/m³	2.13	2.14	2.14	2.12	2.14	2.14	2.13	2.14
Apparent Optimum Moisture Content		%	15.5	14.5	13.0	14.0	14.5	14.0	13.5	14.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	1-2	2	2	2	1-2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3654	3655	3656	3657	3658	3659	3660	3661
DATE TESTED			30/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	96.5	97	98	97	97.5	99.5	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294863.755	294880.603	294876.101	294865.998	294839.316	294858.757	294885.074	294903.869
Northing			6268740.544	6268750.007	6268712.821	6268673.27	6268608.89	6268618.017	6268622.17	6268625
Reduced Level		m	19.832	19.992	20.008	20.249	17.877	18.855	19.683	20.283
Shown on Drawing No			8599/1-61							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.07	2.07	2.08	2.08	2.05	2.11	2.07
Field Moisture Content		%	14.0	14.5	15.5	15.0	15.5	14.5	15.0	14.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3654	3655	3656	3657	3658	3659	3660	3661
Peak Converted Wet Density		t/m³	2.14	2.15	2.13	2.12	2.14	2.10	2.12	2.14
Apparent Optimum Moisture Content		%	14.5	14.5	15.5	15.0	15.5	14.5	15.0	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3662	3663	3664	3665	3666	3667	3668	3669
DATE TESTED			30/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	96	97.5	95	96	97	97.5	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294879.534	294851.9	294837.904	294861.677	294883.926	294893.185	294868.761	294847.469
Northing			6268627.541	6268612.701	6268608.504	6268619.032	6268619.96	6268608.835	6268610.759	6268593.971
Reduced Level		m	19.769	18.753	18.404	19.549	20.256	21.065	20.226	19.306
Shown on Drawing No			8599/1-61							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.05	2.08	2.03	2.05	2.06	2.09	2.10
Field Moisture Content		%	14.5	15.5	15.0	15.0	15.5	15.5	15.0	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3662	3663	3664	3665	3666	3667	3668	3669
Peak Converted Wet Density		t/m³	2.15	2.14	2.13	2.14	2.14	2.12	2.14	2.14
Apparent Optimum Moisture Content		%	15.0	15.5	15.0	15.0	15.0	15.0	14.5	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3670	3671	3672	3673	3674	3675	3676	3677
DATE TESTED			30/10/2017		31/10/2017					
RESULTS										
Hilf Density Ratio	Standard	%	97	96.5	97	96.5	98.5	98	98	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295254.774	295265.462	295260.455	295239.553	295225.272	295211.849	295218.32	295196.285
Northing			6269049.657	6269085.402	6269113.922	6269085.673	6269049.162	6269070.498	6269106.591	6269109.596
Reduced Level		m	18.181	17.742	16.712	17.419	17.866	17.653	16.854	16.061
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.05	2.07	2.08	2.09	2.08	2.06
Field Moisture Content		%	15.5	14.5	14.0	14.5	14.0	14.5	15.5	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3670	3671	3672	3673	3674	3675	3676	3677
Peak Converted Wet Density		t/m³	2.13	2.13	2.11	2.14	2.11	2.13	2.12	2.12
Apparent Optimum Moisture Content		%	15.5	14.5	13.5	14.5	13.5	14.5	15.5	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	1-2	2	1-2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3678	3679	3680	3681	3682	3683	3684	3685
DATE TESTED			31/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	99	96.5	98.5	96	97	100	99
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295179.773	296047.608	296045.226	296035.851	296029.923	296029.776	296002.365	296001.031
Northing			6269063.263	6268644.879	6268583.614	6268539.306	6268589.187	6268649.847	6268643.55	6268599.052
Reduced Level		m	17.37	22.12	22.28	22.268	21.992	21.994	21.393	21.657
Shown on Drawing No			8599/1-59	8599/1-63						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.09	2.05	2.07	2.04	2.06	2.11	2.09
Field Moisture Content		%	15.0	15.0	14.5	15.0	14.0	15.5	14.5	14.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3678	3679	3680	3681	3682	3683	3684	3685
Peak Converted Wet Density		t/m³	2.14	2.11	2.12	2.10	2.12	2.12	2.11	2.11
Apparent Optimum Moisture Content		%	15.0	15.0	15.0	14.5	14.0	15.0	14.0	14.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	1-2	2	1-2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3686	3687	3688	3689	3690	3691	3692	3693
DATE TESTED			31/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	97	96.5	97	98	97.5	97	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.0**	**1.0**	**0.0**	**0.5**	**0.0**	**1.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295973.745	295959.809	295931.553	295914.449	295891.933	295860.205	295862.45	296057.137
Northing			6268597.018	6268645.859	6268617.374	6268574.41	6268624.433	6268613.31	6268579.029	6269743.289
Reduced Level		m	20.624	19.891	19.655	19.639	19.073	19.021	19.035	16.934
Shown on Drawing No			8599/1-63							8599/1-56
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.06	2.05	2.06	2.07	2.08	2.07	2.08
Field Moisture Content		%	15.0	15.5	15.0	14.5	15.0	15.0	15.5	14.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3686	3687	3688	3689	3690	3691	3692	3693
Peak Converted Wet Density		t/m³	2.13	2.12	2.12	2.12	2.11	2.13	2.13	2.12
Apparent Optimum Moisture Content		%	14.5	15.0	15.0	13.5	15.0	14.5	15.5	13.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	1-2	2	1-2	2	1-2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3694	3695	3696	3697	3698	3699	3700	3701
DATE TESTED			31/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	97	99	99.5	99.5	97	97.5	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296073.625	296056.162	296034.281	296017.233	296038.965	296028.955	295998.221	295974.502
Northing			6269787.912	6269798.504	6269750.227	6269754.927	6269810.84	6269837.257	6269792.509	6269752.886
Reduced Level		m	17.026	17.559	18.02	18.477	17.95	17.908	18.649	19.377
Shown on Drawing No			8599/1-56							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.04	2.10	2.12	2.10	2.08	2.07	2.10
Field Moisture Content		%	14.0	14.5	14.5	15.0	15.5	15.5	15.0	14.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3694	3695	3696	3697	3698	3699	3700	3701
Peak Converted Wet Density		t/m³	2.13	2.10	2.12	2.13	2.11	2.14	2.12	2.13
Apparent Optimum Moisture Content		%	14.5	14.5	14.0	15.0	15.0	15.5	15.0	14.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	1-2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3702	3703	3704	3705	3706	3707	3708	3709
DATE TESTED			31/10/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	97	95	99	98	97	98	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294864.774	294871.715	294883.054	294869.088	294856.03	294844.298	294823.007	294827.309
Northing			6268669.07	6268703.38	6268745.448	6268762.146	6268723.584	6268680.094	6268669.343	6268698.934
Reduced Level		m	20.278	20.199	20.087	19.554	19.934	19.768	19.194	19.278
Shown on Drawing No			8599/1-61							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.07	2.02	2.08	2.08	2.06	2.09	2.06
Field Moisture Content		%	15.0	15.5	15.0	15.0	15.0	14.5	15.0	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3702	3703	3704	3705	3706	3707	3708	3709
Peak Converted Wet Density		t/m³	2.12	2.13	2.13	2.10	2.12	2.12	2.13	2.13
Apparent Optimum Moisture Content		%	14.5	15.0	15.0	14.5	15.0	14.5	15.0	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3710	3711	3712	3713	3714	3715	3716	3717
DATE TESTED			31/10/2017			01/11/2017				
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97	98	96.5	98	96.5	97.5	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**-0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294839.519	295418.03	295414.32	295426.412	295436.573	295449.477	295464.696	295473.627
Northing			6268751.259	6268580.728	6268614.328	6268636.138	6268602.767	6268579.177	6268614.553	6268636.633
Reduced Level		m	19.193	23.902	23.504	23.156	23.767	23.661	23.733	22.953
Shown on Drawing No			8599/1-61	8599/1-62						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.05	2.08	2.06	2.09	2.06	2.09	2.04
Field Moisture Content		%	15.5	15.0	15.0	14.0	15.0	15.0	13.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3710	3711	3712	3713	3714	3715	3716	3717
Peak Converted Wet Density		t/m³	2.13	2.11	2.12	2.13	2.13	2.13	2.14	2.13
Apparent Optimum Moisture Content		%	14.5	15.0	14.5	14.0	15.0	14.5	14.0	14.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	1-2	2	2	1-2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3718	3719	3720	3721	3722	3723	3724	3725
DATE TESTED			01/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96	97.5	97.5	98.5	96.5	96.5	96	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**-0.5**	**-0.5**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295483.585	295503.127	295517.321	295531.899	295550.015	295563.222	295596.724	295619.487
Northing			6268589.698	6268574.374	6268600.891	6268639.073	6268607.773	6268566.968	6268644.518	6268588.144
Reduced Level		m	23.557	23.099	23.425	22.797	23.049	22.864	23.049	22.458
Shown on Drawing No			8599/1-62							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.08	2.07	2.11	2.06	2.07	2.05	2.07
Field Moisture Content		%	14.0	15.0	14.5	14.5	13.0	14.5	14.5	14.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3718	3719	3720	3721	3722	3723	3724	3725
Peak Converted Wet Density		t/m³	2.13	2.13	2.12	2.14	2.13	2.14	2.13	2.14
Apparent Optimum Moisture Content		%	14.0	15.0	15.0	15.0	13.0	14.5	14.5	14.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			1-2	2	2	2	1	2	2	1-2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3726	3727	3728	3729	3730	3731	3732	3733
DATE TESTED			01/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	99	96	96	96.5	97.5	96.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295638.695	295652.891	295840.919	295897.212	295963.965	296011.126	296018.269	295974.302
Northing			6268565.075	6268612.434	6268654.903	6268664.371	6268669.734	6268676.075	6268699.66	6268695.208
Reduced Level		m	21.93	22.732	18.267	18.365	19.943	21.629	21.524	20.359
Shown on Drawing No			8599/1-62		8599/1-63					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.10	2.04	2.05	2.06	2.08	2.08	2.08
Field Moisture Content		%	15.0	14.5	15.0	14.0	15.0	14.5	14.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3726	3727	3728	3729	3730	3731	3732	3733
Peak Converted Wet Density		t/m³	2.14	2.12	2.13	2.13	2.13	2.13	2.15	2.14
Apparent Optimum Moisture Content		%	14.5	15.0	15.0	14.0	14.0	14.5	14.5	14.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	1-2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3734	3735	3736	3737	3738	3739	3740	3741
DATE TESTED			01/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96	97.5	96	98	96	97.5	97.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.5**	**-0.5**	**-0.5**	**0.0**	**-0.5**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295922.188	295873.099	295864.203	295901.372	295954.256	296002.702	295173.557	295128.609
Northing			6268691.616	6268689.625	6268708.657	6268722.484	6268727.093	6268730.652	6269070.214	6269072.925
Reduced Level		m	18.939	18.263	18.099	17.961	19.504	20.842	16.932	16.242
Shown on Drawing No			8599/1-63						8599/1-59	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.04	2.07	2.05	2.10	2.05	2.07	2.08	2.09
Field Moisture Content		%	15.0	15.0	15.5	15.0	14.5	15.5	14.5	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3734	3735	3736	3737	3738	3739	3740	3741
Peak Converted Wet Density		t/m³	2.12	2.12	2.13	2.14	2.13	2.12	2.13	2.14
Apparent Optimum Moisture Content		%	15.0	14.5	15.5	15.5	14.5	16.0	14.5	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3742	3743	3744	3745	3746	3747	3748	3749
DATE TESTED			01/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	98.5	96.5	96.5	97.5	97	97.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**-0.5**	**0.0**	**-0.5**	**-0.5**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295085.46	295044.022	295097.59	295137.077	295136.553	295099.181	295063.072	295154.416
Northing			6269076.23	6269061.901	6269058.728	6269055.716	6269034.87	6269035.62	6269036.543	6269083.259
Reduced Level		m	15.578	14.766	16.608	17.203	17.616	17.013	16.24	16.898
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.08	2.06	2.06	2.09	2.08	2.09	2.08
Field Moisture Content		%	13.5	15.0	14.0	14.5	13.5	14.5	15.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3742	3743	3744	3745	3746	3747	3748	3749
Peak Converted Wet Density		t/m³	2.14	2.11	2.13	2.14	2.14	2.14	2.14	2.14
Apparent Optimum Moisture Content		%	13.5	15.0	14.0	15.0	14.0	14.5	15.5	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			1-2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3750	3751	3752	3753	3754	3755	3756	3757
DATE TESTED			01/11/2017	02/11/2017						
RESULTS										
Hilf Density Ratio	Standard	%	98	97	97.5	98.5	96	96	96	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295098.747	295068.972	295117.471	295151.177	295117.733	295066.538	295060.002	295118.758
Northing			6269081.151	6269068.163	6269063.146	6269061.547	6269048.958	6269048.437	6269030.074	6269027.174
Reduced Level		m	16.316	16.452	17.228	17.273	17.501	16.961	17.507	17.934
Shown on Drawing No			8599/1-59							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.06	2.09	2.09	2.05	2.05	2.04	2.05
Field Moisture Content		%	14.5	17.0	16.5	17.0	17.0	16.5	17.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3750	3751	3752	3753	3754	3755	3756	3757
Peak Converted Wet Density		t/m³	2.14	2.12	2.14	2.12	2.14	2.13	2.13	2.14
Apparent Optimum Moisture Content		%	14.5	17.0	16.5	17.0	17.0	16.5	17.5	18.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3758	3759	3760	3761	3762	3763	3764	3765
DATE TESTED			02/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97	97	96	96	97.5	99	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.5**	**0.5**	**0.0**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295680.479	295636.184	295585.54	295576.998	295622.316	295658.832	295643.07	295599.171
Northing			6268637.005	6268637.834	6268636.865	6268618.061	6268613.292	6268605.697	6268588.501	6268596.882
Reduced Level		m	22.822	23.21	23.156	23.573	23.355	22.897	22.828	23.528
Shown on Drawing No			8599/1-62							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.08	2.07	2.05	2.04	2.07	2.09	2.08
Field Moisture Content		%	18.0	17.0	16.5	18.5	18.5	18.5	18.0	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3758	3759	3760	3761	3762	3763	3764	3765
Peak Converted Wet Density		t/m³	2.14	2.14	2.13	2.13	2.13	2.12	2.11	2.14
Apparent Optimum Moisture Content		%	17.0	17.0	16.0	18.0	18.0	18.5	17.5	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3766	3767	3768	3769	3770	3771	3772	3773
DATE TESTED			02/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96	98.5	97.5	96	97	96	96	96.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295559.722	295598.3	295639.719	295643.294	295614.133	295472.836	295502.959	295519.259
Northing			6268599.685	6268585.072	6268577.137	6268554.767	6268560.373	6268609.562	6268604.266	6268622.371
Reduced Level		m	23.468	23.479	22.917	22.027	22.362	23.907	23.662	23.208
Shown on Drawing No			8599/1-62							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.09	2.07	2.04	2.07	2.05	2.03	2.06
Field Moisture Content		%	17.5	18.0	17.0	19.0	18.5	17.5	17.5	18.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3766	3767	3768	3769	3770	3771	3772	3773
Peak Converted Wet Density		t/m³	2.14	2.12	2.12	2.12	2.13	2.14	2.12	2.14
Apparent Optimum Moisture Content		%	17.5	18.0	17.0	18.5	18.5	17.5	17.5	18.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3774	3775	3776	3777	3778	3779	3780	3781
DATE TESTED			02/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98	96	97	96.5	99	95	98.5	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.5**	**0.5**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295499.125	295466.3	295959.339	295913.403	295888.332	295942.221	295991.879	296024.414
Northing			6268624.197	6268633.234	6268486.476	6268495.872	6268516.705	6268521.307	6268518.146	6268527.022
Reduced Level		m	23.386	23.121	21.246	19.943	19.318	20.969	21.434	22.183
Shown on Drawing No			8599/1-62		8599/1-63					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.05	2.06	2.07	2.10	2.03	2.10	2.11
Field Moisture Content		%	17.5	16.5	17.0	16.5	18.0	18.0	17.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3774	3775	3776	3777	3778	3779	3780	3781
Peak Converted Wet Density		t/m³	2.13	2.13	2.12	2.14	2.12	2.14	2.13	2.14
Apparent Optimum Moisture Content		%	17.5	16.0	17.0	16.5	17.5	18.0	17.5	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3782	3783	3784	3785	3786	3787	3788	3789
DATE TESTED			02/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97.5	96.5	97.5	96.5	98	98	96	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295979.63	295938.707	295891.514	295864.254	295899.871	295941.718	295573.486	295622.531
Northing			6268536.193	6268542.669	6268550.003	6268559.111	6268571.82	6268574.776	6268628.972	6268629.391
Reduced Level		m	21.644	20.451	19.382	18.835	19.485	20.046	23.357	23.27
Shown on Drawing No			8599/1-63						8599/1-62	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.05	2.07	2.06	2.08	2.08	2.05	2.05
Field Moisture Content		%	17.5	17.5	18.0	18.5	18.5	17.0	17.0	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3782	3783	3784	3785	3786	3787	3788	3789
Peak Converted Wet Density		t/m³	2.12	2.12	2.12	2.13	2.12	2.12	2.14	2.13
Apparent Optimum Moisture Content		%	17.5	17.5	18.0	18.5	18.5	16.5	17.0	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3790	3791	3792	3793	3794	3795	3796	3797
DATE TESTED			03/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	96.5	97	97	95.5	97	98	96
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**1.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295664.119	295660.93	295622.505	295580.345	295570.007	295606.485	295639.742	295645.657
Northing			6268628.39	6268609.847	6268611.595	6268612.626	6268590.555	6268588.672	6268584.977	6268566.267
Reduced Level		m	23.012	22.823	23.552	23.797	23.981	23.796	23.257	23.078
Shown on Drawing No			8599/1-62							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.06	2.08	2.07	2.05	2.06	2.08	2.05
Field Moisture Content		%	18.0	17.5	17.5	16.5	16.5	17.0	17.5	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3790	3791	3792	3793	3794	3795	3796	3797
Peak Converted Wet Density		t/m³	2.13	2.13	2.14	2.13	2.15	2.12	2.12	2.13
Apparent Optimum Moisture Content		%	18.0	16.5	17.5	16.5	16.5	17.0	17.5	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3798	3799	3800	3801	3802	3803	3804	3805
DATE TESTED			03/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96	95.5	96.5	98	96	96	98	98.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295612.183	295569.1	295524.55	295487.688	295439.692	295398.977	295397.65	295431.52
Northing			6268568.181	6268574.401	6268580.53	6268584.146	6268587.671	6268588.333	6268605.982	6268599.024
Reduced Level		m	23.401	23.641	23.478	23.764	23.936	23.822	23.919	24.298
Shown on Drawing No			8599/1-62							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.03	2.04	2.05	2.07	2.04	2.05	2.08	2.10
Field Moisture Content		%	17.5	18.5	18.5	17.0	17.0	17.5	17.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3798	3799	3800	3801	3802	3803	3804	3805
Peak Converted Wet Density		t/m³	2.12	2.14	2.12	2.11	2.13	2.13	2.12	2.13
Apparent Optimum Moisture Content		%	17.0	18.5	18.5	17.0	17.0	17.0	17.0	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3806	3807	3808	3809	3810	3811	3812	3813
DATE TESTED			03/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	96.5	96.5	95	99.5	97.5	96.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295480.073	295512.181	295210.767	295192.426	295209.128	295231.399	295253.893	295264.134
Northing			6268597.285	6268596.34	6269121.079	6269095.385	6269087.139	6269108.244	6269106.102	6269082.867
Reduced Level		m	24.117	23.74	15.774	16.295	16.901	16.803	16.985	17.81
Shown on Drawing No			8599/1-62		8599/1-59					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.06	2.03	2.11	2.07	2.06	2.06
Field Moisture Content		%	17.0	17.0	16.0	16.0	18.5	17.5	18.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3806	3807	3808	3809	3810	3811	3812	3813
Peak Converted Wet Density		t/m³	2.14	2.13	2.13	2.14	2.12	2.12	2.13	2.12
Apparent Optimum Moisture Content		%	16.5	16.5	16.0	16.0	18.0	17.5	18.0	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3814	3815	3816	3817	3818	3819	3820	3821
DATE TESTED			03/11/2017		09/11/2017					
RESULTS										
Hilf Density Ratio	Standard	%	97	98	99.5	99.5	96.5	96.5	98.5	96.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**1.0**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295424.541	295450.123	295486.156	295511.034	295493.11	295462.612	295430.362	295401.979
Northing			6269576.868	6269601.996	6269642.978	6269669.666	6269680.32	6269649.921	6269614.435	6269579.604
Reduced Level		m	12.407	12.647	12.387	12.339	12.322	12.498	12.304	12.408
Shown on Drawing No			8599/1-58		8599/1-57				8599/1-58	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.07	2.12	2.09	2.06	2.05	2.10	2.04
Field Moisture Content		%	18.5	17.5	19.5	20.0	19.5	19.5	19.5	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3814	3815	3816	3817	3818	3819	3820	3821
Peak Converted Wet Density		t/m³	2.14	2.11	2.13	2.10	2.13	2.12	2.13	2.11
Apparent Optimum Moisture Content		%	18.5	17.0	19.5	20.0	19.5	18.5	20.0	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2-3	2-3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3822	3823	3824	3825	3826	3827	3828	3829
DATE TESTED			09/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	98	97	96	96.5	96.5	99	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295388.05	295424.921	295464.959	295494.851	295590.301	295609.481	295629.048	295645.186
Northing			6269596.59	6269639.512	6269680.66	6269709.551	6269623.495	6269650.23	6269686.027	6269718.382
Reduced Level		m	12.026	12.25	12.557	12.123	17.95	17.922	17.651	17.105
Shown on Drawing No			8599/1-58	8599/1-57						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.07	2.05	2.04	2.04	2.05	2.10	2.06
Field Moisture Content		%	18.5	18.5	19.0	19.0	19.5	20.0	18.0	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3822	3823	3824	3825	3826	3827	3828	3829
Peak Converted Wet Density		t/m³	2.11	2.11	2.11	2.13	2.11	2.12	2.12	2.11
Apparent Optimum Moisture Content		%	19.0	18.0	19.0	18.5	19.0	20.0	17.5	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2	2-3	2-3	2-3	2-3	2	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3830	3831	3832	3833	3834	3835	3836	3837
DATE TESTED			09/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	97	98	97.5	96	96.5	97.5	97
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295667.138	295700.215	295704.441	295680.616	295664.478	295645.285	295625.1	295656.689
Northing			6269762.881	6269815.722	6269791.482	6269742.553	6269711.069	6269680.77	6269635.769	6269632.134
Reduced Level		m	16.032	16.117	16.506	16.948	17.683	18.187	18.489	18.81
Shown on Drawing No			8599/1-57	8599/1-56			8599/1-57			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.07	2.07	2.08	2.03	2.04	2.07	2.05
Field Moisture Content		%	22.0	19.5	18.0	18.5	22.5	21.0	20.0	20.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3830	3831	3832	3833	3834	3835	3836	3837
Peak Converted Wet Density		t/m³	2.12	2.13	2.11	2.13	2.12	2.11	2.12	2.11
Apparent Optimum Moisture Content		%	21.5	19.5	18.0	18.5	22.5	20.5	20.0	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			3	2-3	2	2	3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3838	3839	3840	3841	3842	3843	3844	3845
DATE TESTED			09/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	98.5	98	98.5	98	96	96	98
Moisture Variation from OMC	(-Drier/+Wetter)	%	**-0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295695.502	295724.441	295757.051	295774.053	295738.526	295752.195	295673.958	295652.646
Northing			6269680.916	6269725.745	6269779.939	6269761.505	6269712.455	6269707.856	6269813.356	6269783.208
Reduced Level		m	18.606	17.901	17.547	18.056	18.463	18.675	15.654	15.449
Shown on Drawing No			8599/1-56							8599/1-57
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.09	2.09	2.08	2.07	2.04	2.04	2.07
Field Moisture Content		%	20.0	20.5	22.0	20.0	20.5	20.5	19.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3838	3839	3840	3841	3842	3843	3844	3845
Peak Converted Wet Density		t/m³	2.13	2.12	2.13	2.11	2.11	2.12	2.12	2.11
Apparent Optimum Moisture Content		%	20.5	20.5	22.0	20.0	20.0	20.5	19.5	19.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	3	3	2-3	2-3	2-3	2-3	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3846	3847	3848	3849	3850	3851	3852	3853
DATE TESTED			09/11/2017					10/11/2017		
RESULTS										
Hilf Density Ratio	Standard	%	97.5	98.5	95.5	97	96.5	96.5	96.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295616.571	295635.406	295664.514	295595.851	295615.177	295635.461	295652.943	295678.963
Northing			6269729.926	6269780.265	6269830.939	6269640.008	6269676.231	6269724.202	6269760.513	6269803.205
Reduced Level		m	15.613	15.452	14.636	17.777	17.8	16.964	16.434	16.194
Shown on Drawing No			8599/1-57							8599/1-56
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.09	2.03	2.06	2.04	2.07	2.05	2.07
Field Moisture Content		%	20.5	20.5	19.5	19.5	20.0	14.0	14.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3846	3847	3848	3849	3850	3851	3852	3853
Peak Converted Wet Density		t/m³	2.12	2.12	2.13	2.12	2.11	2.14	2.12	2.12
Apparent Optimum Moisture Content		%	20.0	20.0	19.5	19.0	20.0	13.5	14.5	14.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2-3	2-3	2-3	2-3	2-3	1-2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3854	3855	3856	3857	3858	3859	3860	3861
DATE TESTED			10/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	98	96.5	96	97	98.5	97.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.5**	**-0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**1.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295710.159	295692.415	295671.228	295653.526	295633.255	295653.845	295673.974	295698.2
Northing			6269818.362	6269791.696	6269753.649	6269722.819	6269664.643	6269690.195	6269724.009	6269759.272
Reduced Level		m	16.266	16.572	16.757	16.982	18.094	18.473	17.408	17.184
Shown on Drawing No			8599/1-57							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.09	2.08	2.06	2.05	2.06	2.08	2.07	2.08
Field Moisture Content		%	15.5	15.5	18.0	15.0	21.5	15.0	12.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3854	3855	3856	3857	3858	3859	3860	3861
Peak Converted Wet Density		t/m³	2.12	2.12	2.13	2.13	2.12	2.11	2.12	2.13
Apparent Optimum Moisture Content		%	14.5	15.0	18.5	14.5	21.5	15.0	11.5	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	3	2	1	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3862	3863	3864	3865	3866	3867	3868	3869
DATE TESTED			10/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	96.5	97.5	99	98.5	98.5	98.5	97.5
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295729.354	295740.887	295719.306	295700.596	295669.751	295683.253	295700.996	295723.673
Northing			6269806.354	6269788.676	6269746.963	6269709.969	6269653.595	6269626.883	6269652.982	6269699.974
Reduced Level		m	16.85	17.483	17.955	18.148	18.604	18.598	18.903	18.553
Shown on Drawing No			8599/1-57							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.06	2.08	2.09	2.07	2.10	2.09	2.06
Field Moisture Content		%	15.5	18.5	17.5	19.5	18.5	22.5	22.5	22.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			3862	3863	3864	3865	3866	3867	3868	3869
Peak Converted Wet Density		t/m³	2.11	2.13	2.13	2.11	2.10	2.13	2.12	2.11
Apparent Optimum Moisture Content		%	15.5	18.5	17.0	19.5	18.5	22.5	22.0	22.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2-3	2	3	3	3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
PO BOX 299
WALLSEND NSW 2287

Laboratory: Penrith
Job No: 8599/1
Date: 24/11/2017

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			3870	3871	3872	3873	3874	3875		
DATE TESTED			10/11/2017							
RESULTS										
Hilf Density Ratio	Standard	%	97	96	97.5	98	98	98		
Moisture Variation from OMC	(-Drier/+Wetter)	%	**0.5**	**0.0**	**0.5**	**0.0**	**0.5**	**0.0**		
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295757.334	295782.779	295813.9	295846.422	295520.267	295549.617		
Northing			6269756.135	6269773.908	6269758.051	6269742.702	6269401.04	6269386.018		
Reduced Level		m	18.098	18.481	18.88	19.602	17.19	18.02		
Shown on Drawing No			8599/1-57	8599/1-56			8599/1-58			
Retested by Test			-	-	-	-	-	-		
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.05	2.06	2.09	2.07	2.09		
Field Moisture Content		%	23.5	17.0	19.5	17.0	15.0	14.5		
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5		
Lab Compaction result from test number			3870	3871	3872	3873	3874	3875		
Peak Converted Wet Density		t/m³	2.12	2.13	2.11	2.13	2.11	2.13		
Apparent Optimum Moisture Content		%	23.0	17.0	19.5	16.5	15.0	14.5		
Number of Compaction Points			3	3	3	3	3	3		
Test Procedures - See Note Number			12	12	12	12	12	12		
Material Description - see below			3	2	2-3	2	2	2		

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. Cl-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

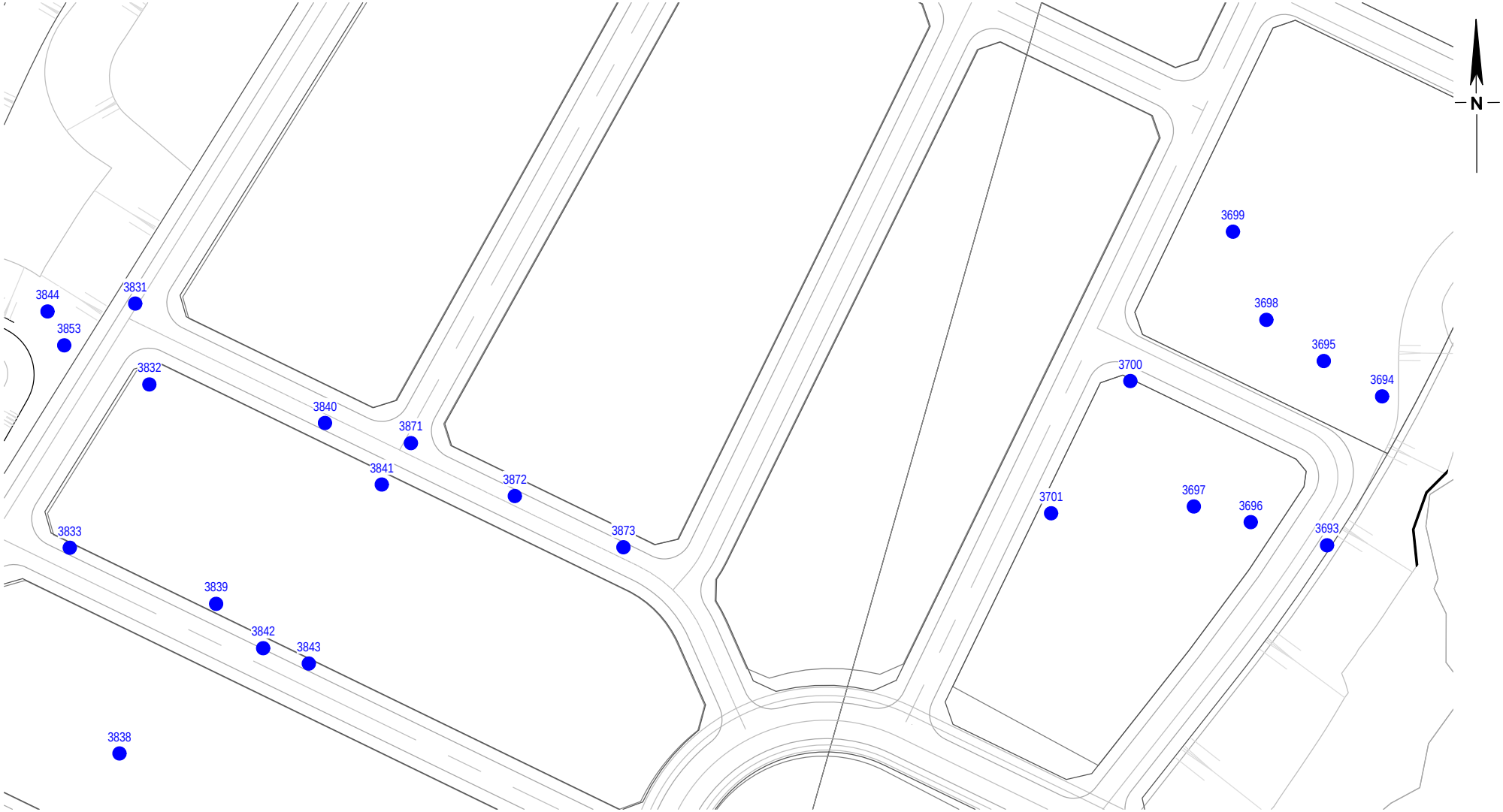
Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 24/11/2017
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au



LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-56
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay56

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

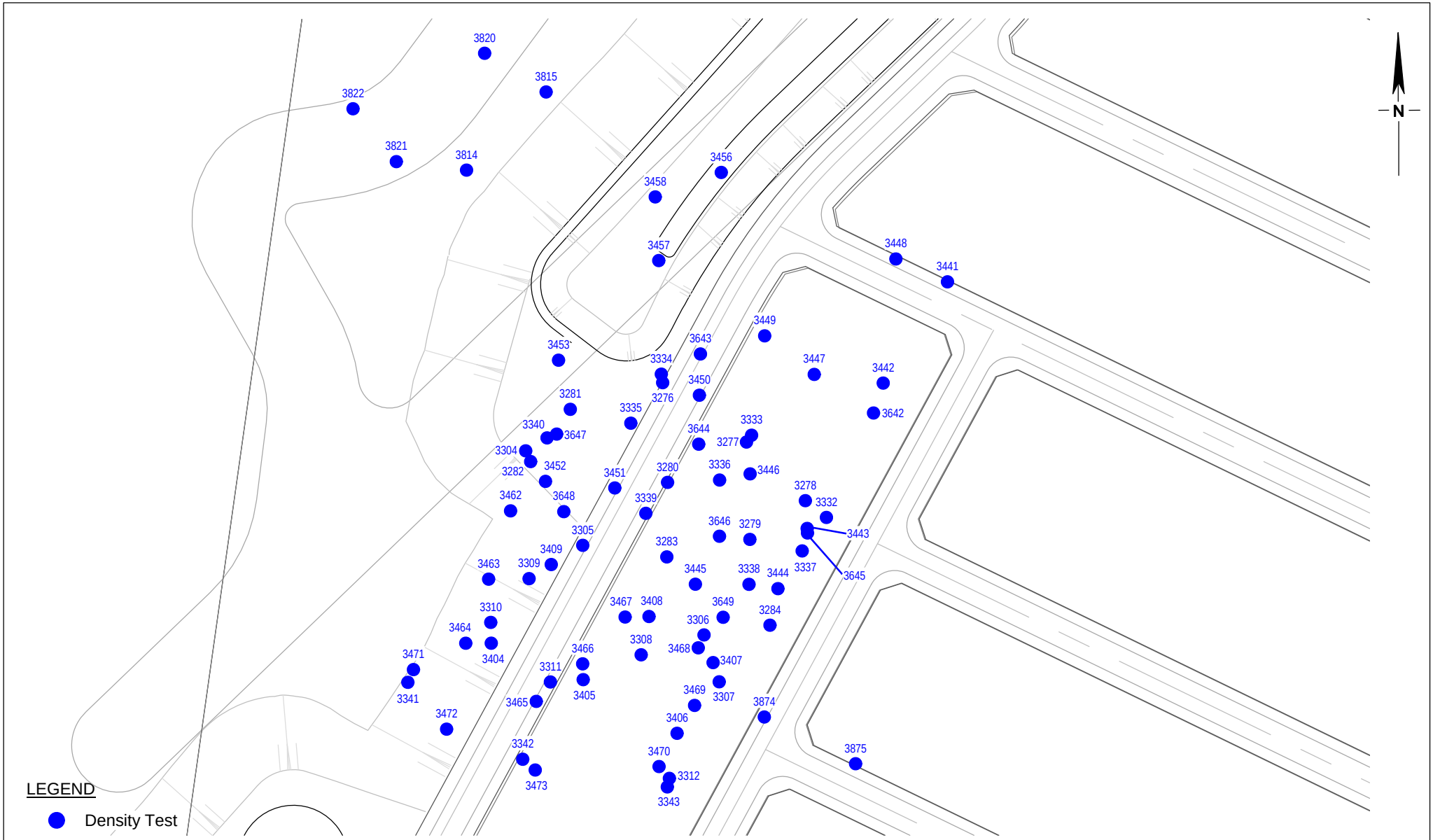
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-57
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay57



GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

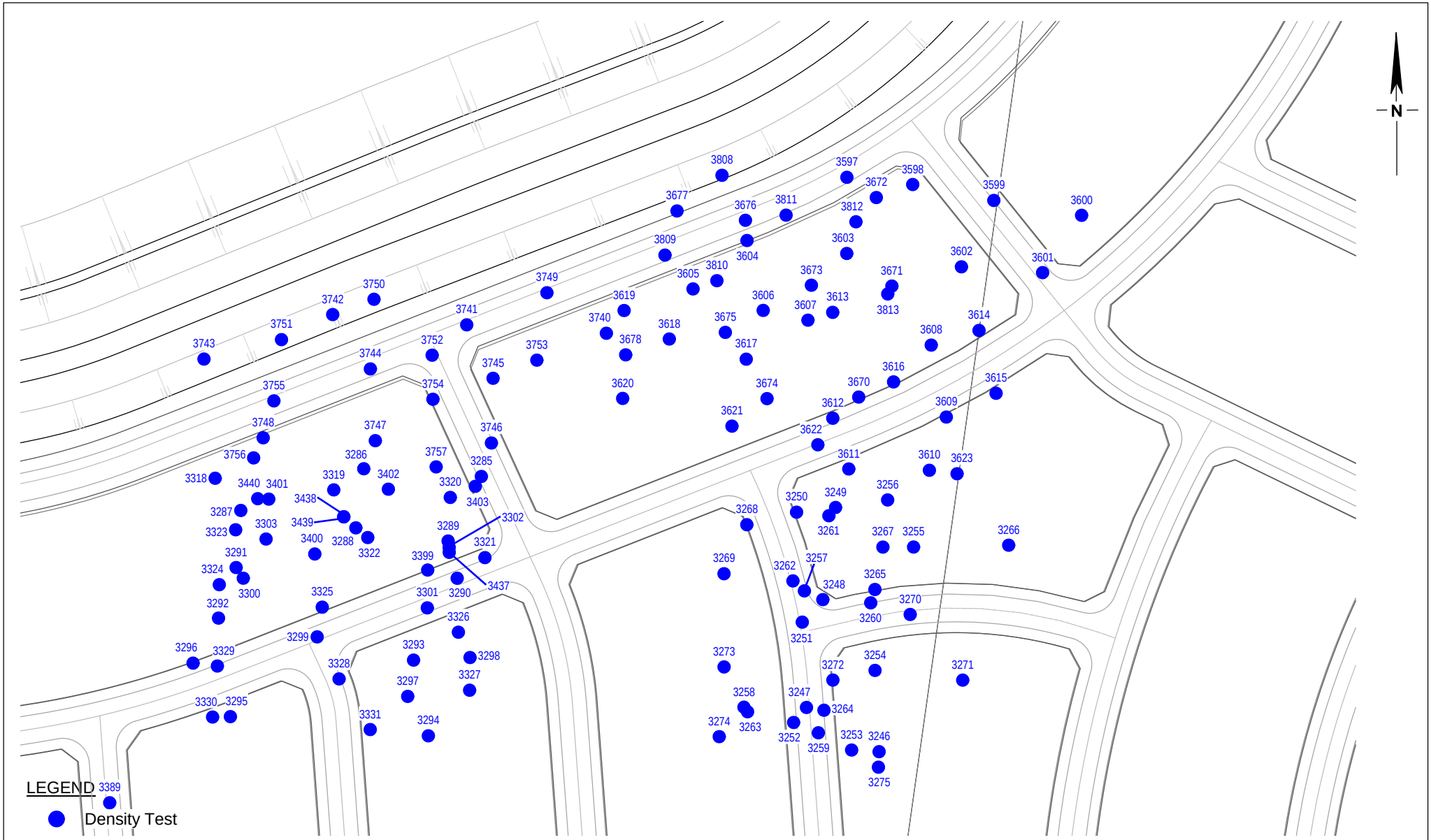
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-58
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay58



GEOTECH TESTING PTY LTD ®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

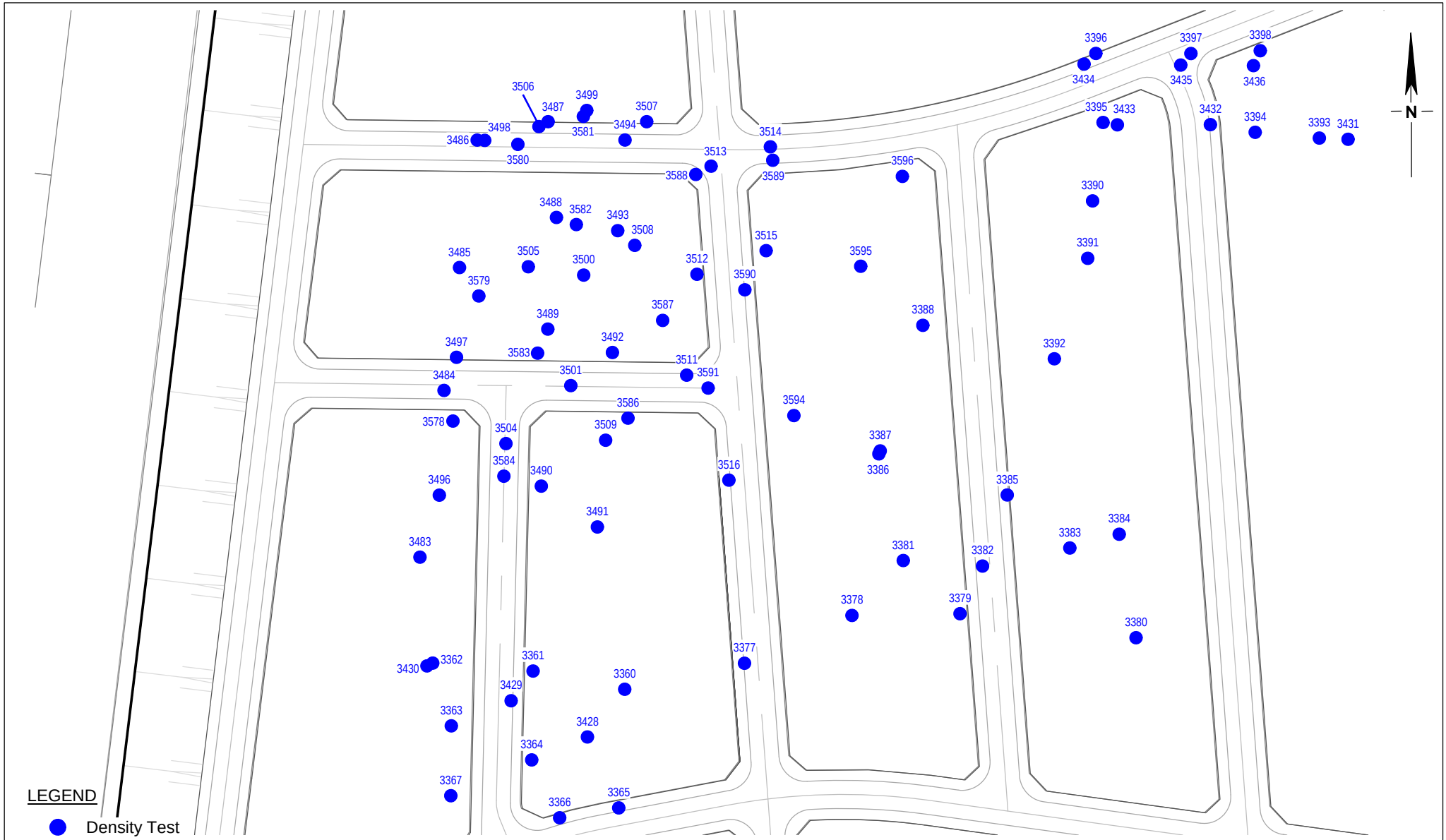
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-59
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay59



GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-60
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay60

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

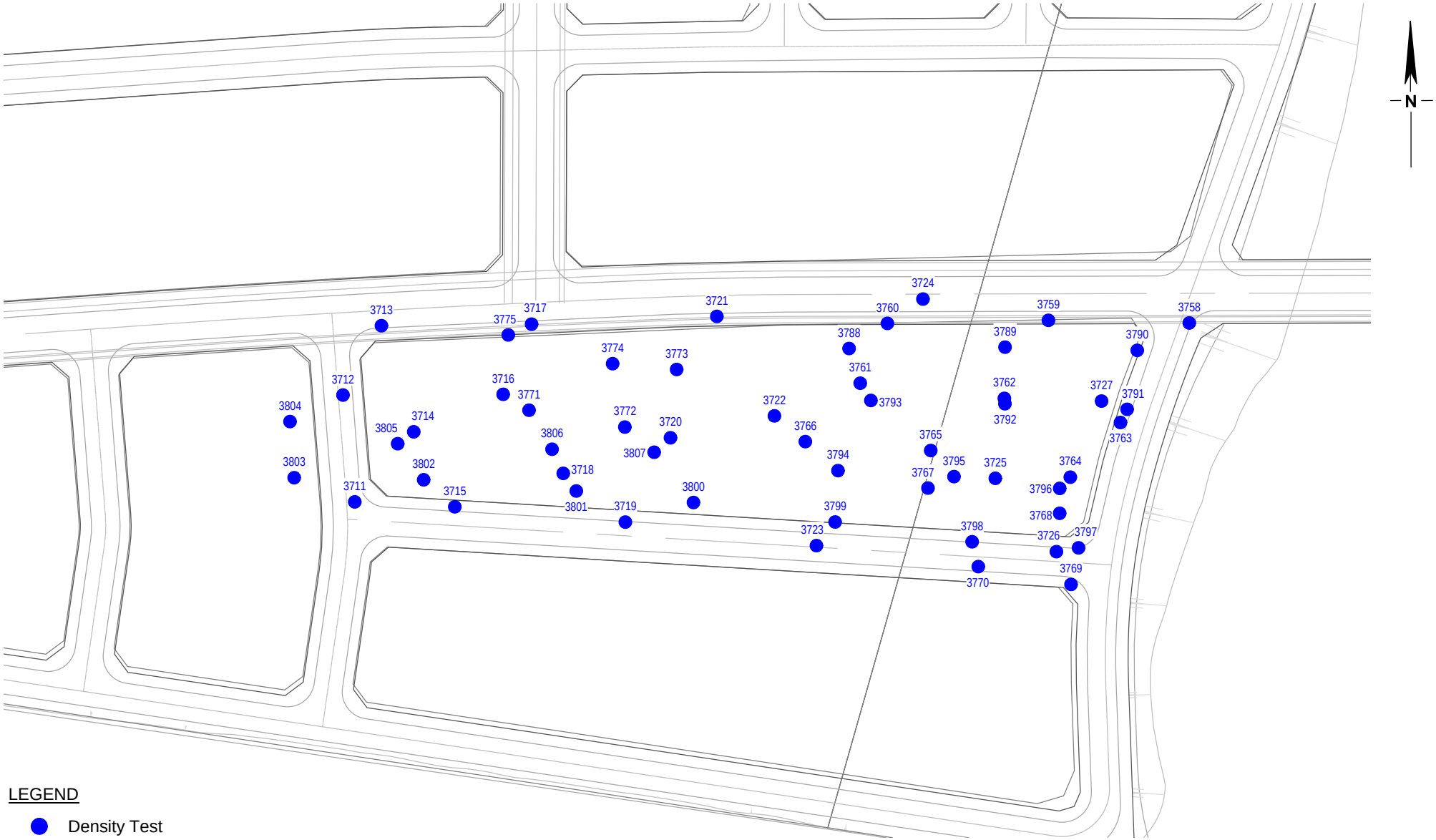
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-61
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay61



LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-62
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay62

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

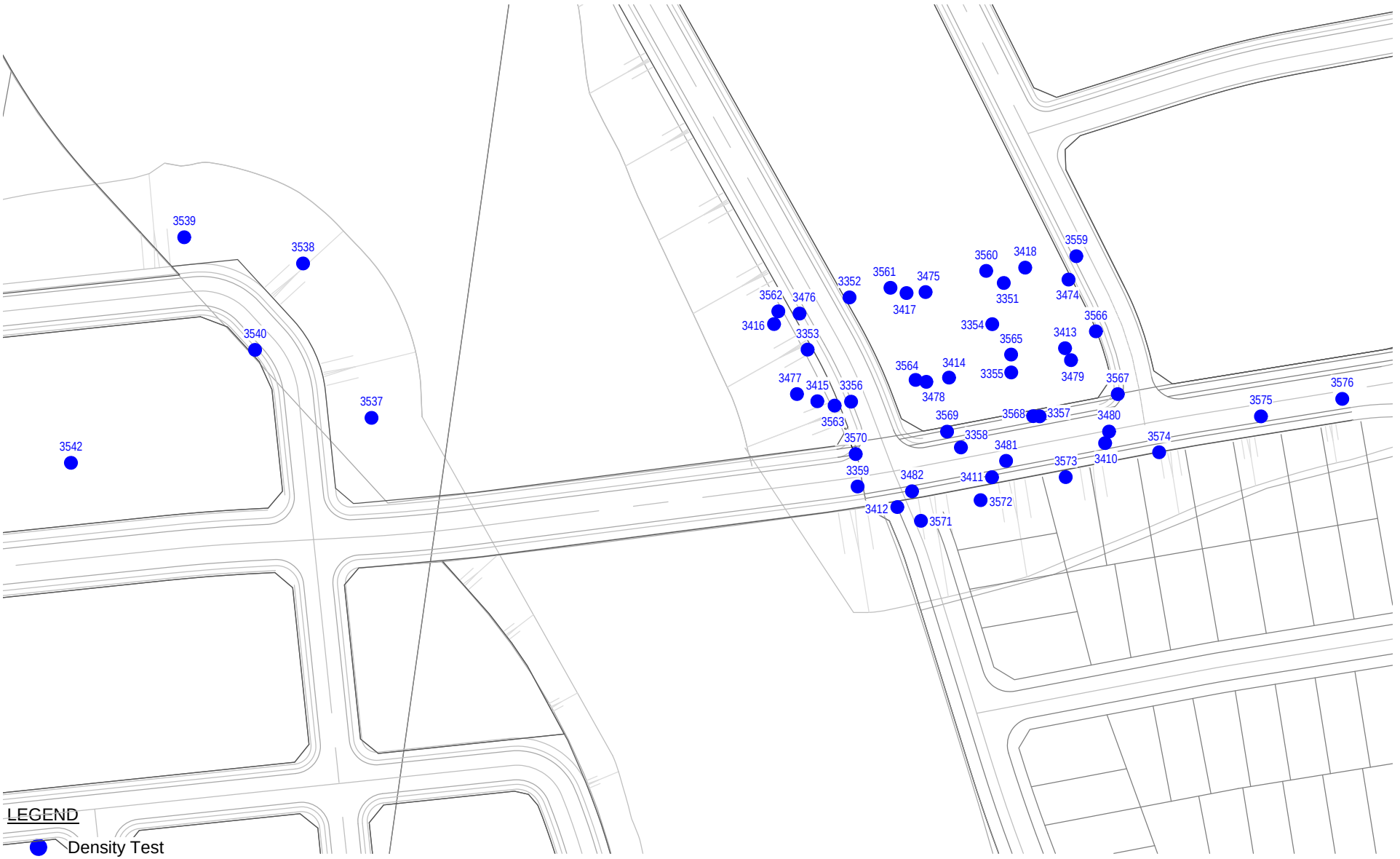
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-63
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay63



GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-64
Job No: 8599/1
Drawn By: MH
Date: 24 November 2017
Checked By: AK

File No: 8599-1
Layers: 0, Lay64

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	179
Location:	Marsden Park	Report Date:	10 /10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE #5	TEST NO'S 3246 -3277 /32
APPROVED SUBGRADE	SUBGRADE 13	TEST NO'S 3278-3296 /9

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey Test Locations Lot Boundaries	Survey undertaken by: Geotech / Geotech /	Reference

4. Instructions received on site

9 x DUMPTRUCKS LOADED BY 2x 654 EXCAVATORS FROM DESIGNATED BORROW ZONES E,F AND DESTINATION HEADED TO (S4)13 / DAM AREA
825 COMPACTOR PUSHING SOUTH TOWARDS (S4)15 BOX FENCE
2x 631 SCRAPERS PUSHED BY D10 IN CUT AREA IN (S4)15 MATERIAL PLACED

5. Instructions given on site

IN FILL AREA (S4)15
6x 627 SCRAPERS ALSO SELF LOADING IN SAME CUT AS 631'S AND PLACING IN AREA OF FILL 825 FILLING TOW SPOT TOWARDS THE WEST FOR WATER RUN OFF INTO NATURAL EVERMENT

COMMENTS: 40,000LTR WATERCART x2 RUNNING AROUND FILL AREA DAILY TO KEEP THE MATERIAL TO SPEC

Signed: Date: 10-10-17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	190
Location:	Marsden Park	Report Date:	11 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 14	TEST NO'S 3287 - 3305/19
APPROVED SUBGRADE	SUBGRADE 13	TEST NO'S 3306 - 3314/19

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
NO SUBGRADE APPROVAL	DAM AREA	TEST NO'S 3315 - 3319/5

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

6x 627 SCRAPERS CARTING MATERIEL FROM CUT IN AREAS SG 12 AND 14 AND PLACING IN APPROVED SUBGRADE 14 825 COMPACTOR PUSHING TO THE WEST TOWARDS STONEY CREEK ROAD
4x 637 BBH SCRAPERS CARTING MATERIEL TO (SG) 04 WITH 825 COMPACTOR

5. Instructions given on site

ALSO PUSHING TO THE WEST TIGHT AGAINST BOY INTO (SG) 11
10 x DEMPI TRUCKS LOADED BY 2x 651 EXCAVATORS FROM BORROW ZONES E.F AND HEADED TO APPROVED SG 13 AND DAM AREA 825 AND 815 COMPACTOR PUSHING AND COMPACTING OF THE FACE, GRADER TRIMMING HAUL ROADS

COMMENTS: FOR MACHINES THE EXIT AND ENTRYS TO PLACEMENT AREAS ALSO THE FILL AREAS THAT ARE CLOSE TO FSL

Signed: Date: 11.10.17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	151
Location:	Marsden Park	Report Date:	12/10/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 15	TEST NO'S 3320 - 3333/14
APPROVED SUBGRADE	SUBGRADE 13 AND DAM AREA	TEST NO'S 3334 3352/19

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 04/BH MINING	TEST NO'S 3353/3362/10

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

D8 RIPPING CUT IN (SG)14 FOR SCRAPERS DIO PUSHING THE 631'S THROUGH CT AND PLACED IN (SG)15 ANOTHER 4x 627 SCRAPERS ALSO CARTING FROM THE SAME AREA AND PLACING IN DESIGNATED 10cm AREAS ALONG STONEY CREEK ROAD (BAY) 825 WORKING (SG)15 AT THE MOMENT AND WILL WORK ACROSS TO PLACED

5. Instructions given on site

MATERIEL, 40,000LTR WATERCART SPRAYING WHERE CUT AREAS TO BE PLACED BEFORE AND AFTER PLACEMENT

8 DUMPTRUCKS HAULING FROM BORROW ZONE E.I.T BY 2x 85t EXCAVATORS AND HAULED TO APPROVED SUBGRADE 13/DAM AREA 825 ALSO PUSHING EAST TO BOX

COMMENTS: FOR NEXT LIFT/LAYER

Signed: Date: 12.10.17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	182
Location:	Marsden Park	Report Date:	13 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Tomas ~~Heath Wilson~~

Time on site: 6:30

Time off site: 4:30

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved Subgrade	Subgrade 16	test No's 3363 - 3379/17
Approved Subgrade	Subgrade 16	test No's 3380 - 3410/31

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
Approved Subgrade	Subgrade 15	test No's 3411 - 3424/13
~~Approved Subgrade~~	~~Subgrade 13 & dam~~	~~test No's 3404 - 3409~~

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 13/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	187
Location:	Marsden Park	Report Date:	16 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	T - S ~~Heath Wilson~~

Time on site: 6:30
Time off site: 4:30

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved Subgrade	Subgrade 16	test No's 3422 - 3433/12
Approved Subgrade	Subgrade 15	test No's 3434 - 3461 / 28

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
Approved Subgrade	13 & dam	test No's 3462 - 3485/24

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 16·10·2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	184
Location:	Marsden Park	Report Date:	17 / 10/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 6:30
Time off site: 4:30

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved Subgrade	Subgrade 16	test No's 3486-3496/11

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 17/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	195
Location:	Marsden Park	Report Date:	18 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 6:30
Time off site: 4:30

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved SG	Subgrade 16	test No's 3497 - 3518/22
Approved SG	Subgrade 11	test No's - 3519 - 3560/42

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 18/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	~~D~~ 186
Location:	Marsden Park	Report Date:	19 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	

Time on site: 6:30
Time off site: 4:30

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APProved Subgrade	Subgrade 14	test No's 3561-3579/18

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 19/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	D 187
Location:	Marsden Park	Report Date:	24/10/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	

Time on site: 6:30
Time off site: 4:30

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved Subgrade	Subgrade 16	test no's 3577 - 3578/20

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 24/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/3
Project:	Woorong Bulk Earthworks	Report No:	D 188
Location:	Marsden Park	Report Date:	25/10/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	TS

Time on site: 0630

Time off site: 1630

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved Subgrade	Subgrade IS	test No's 3599-3625/27

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 25/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	D 187
Location:	Marsden Park	Report Date:	26/10/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	TS

Time on site: 0630

Time off site: 1630

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
Approved Subgrade	Subgrade 16	Test No's 3626 - 3643/18

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS:

Signed: Date: 26/10/2017

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	D 190
Location:	Marsden Park	Report Date:	30 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	AW

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 13	TEST NO'S 3644 - 3651 / 8
APPROVED SUBGRADE	SUBGRADE 16	TEST NO'S 3652 - 3659 / 8

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 17	TEST NO'S 3660 - 3671 / 12

3. Survey

Type of Survey Test Locations Lot Boundaries	Survey undertaken by: Geotech / Geotech /	Reference

4. Instructions received on site

2x 631 SCRAPERS PUSHED BY D10 IN CUT AREA MATERIAL PLACED IN (B4) 3A
631 COMPACTOR PUSHING MATERIAL WEST FOR NEW LAYER / LIFT
ALSO 2x 631 SCRAPERS LOADING FROM CUT AREA IN (B4) 17 AND PLACING IN
APPROVED SUBGRADE 16 ALSO 631 COMPACTOR PUSHING EAST ALONG THE

5. Instructions given on site

FACE OF BATTER TOWARDS SG (17) OVER EXISTING HAUL ROAD
SEIT LOADING MAIN SCRAPER PLACING TOPSOIL OVER FINISHED PADS (B4) 10
AND 12 IN GPS FIELD FILES
GRADER TRIMMING UP PADS DUE TO HEAVY RAIN CLEAN UP NEEDED FOR

COMMENTS: FURTHER PLACEMENT

Signed: Date: 30-10-17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	D 191
Location:	Marsden Park	Report Date:	31 / 10 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	HW

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADES 14.15	TEST NO'S 3672 - 3679/8
APPROVED SUBGRADE	SUBGRADE 11	TEST NO'S 3680 - 3694/15

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 08	TEST NO'S 3695 - 3703/9
APPROVED SUBGRADE	SUBGRADE 16	TEST NO'S 3704 - 3712/12

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

D8 RIPPING CUT AREA ON HIGH SPOT OF (SG) 14 TO BE PLACED IN (SG) 14 2 x 631 SCRAPERS PUSHED BY D10 TO BE PLACED AS FILL MATERIAL UP AGAINST FACE OF BATTER ALSO 1 x SOIL LOADING BABY SCRAPER LAYING TO THE SAME ZONE. ALSO ANOTHER D8 RIPPING CUT FOR 6 x 631 SCRAPERS TO PLACE IN (SG) 12

5. Instructions given on site

WHERE 825 COMPACTOR IS WORKING EAST TOWARDS ZONE (D) BOY AREA FOR THE FINAL PUSH LAYER BEFORE TOPSOILING
GRADER TRIMMING SUBGRADES FOR WATER RUNOFF AS EXPECTED

COMMENTS:

Signed: [signature]

Date: 31-10-17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	D 192
Location:	Marsden Park	Report Date:	01 / 11 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	HW

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 12	TEST NO'S 3713 - 3729/17
APPROVED SUBGRADE	SUBGRADE 11	TEST NO'S 3730 - 3741/12

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 15	TEST NO'S 3742 - 3750/10

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

08 RIPPING CUT AREA AT THE START OF SUBGRADE 16 WHERE DIG A-SLING X2 631 SCRAPERS TO PLACE AT LOWER POINT TOWARDS SYDNEY BY ROAD 825 COMPACTOR PUSHING WEST ALONG CURB 2x 627 SCRAPERS WORKING INTO SUBGRADE (15) 8x 627 SCRAPERS ALSO PICKING UP RIPPED MATERIAL FOR PLACEMENT

5. Instructions given on site

IN APPROVED SUBGRADE 12 ALSO 825 PUSHING EAST TOWARDS SILT FENCE OVER THE CULVERT

GRADER TRIMMING UP FILL AREAS FOR TYRED MACHINES IN AND OUT EXITS FOR SAFE ACCESS

COMMENTS:

Signed: Date: 01-11-17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	D 193
Location:	Marsden Park	Report Date:	02 / 11 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	HW

Time on site: 0630
Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 15	TEST NO'S 3751 - 3759 / 9
APPROVED SUBGRADE	SUBGRADE 12	TEST NO'S 3760 - 3777 / 18

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 11	TEST NO'S 3778 - 3789 / 12

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

D10 PUSHING 2x 627 SCRAPERS THROUGH CUT AREA RIPPED BY D8 IN ZONE OF SUBGRADE (15) ALONG WITH 2x 627 SCRAPERS FILL BEING PLACED IN (14) 15 825 COMPACTOR PUSHING MATERIEL WEST DOWN HILL FOR NEXT COVER LAYER BRIDGING WET EXCAVATED SPOT

5. Instructions given on site

ALSO ANOTHER 4x 627 SCRAPERS CUTTING IN HIGH AREA (13) 12 AFTER D8 RIPPING MATERIEL PLACED FOR FINAL LAYER OVER EAST ENT TOWARDS (14) 11 OVER CULVERT
40,000LTR WATERCART SPRAYING AS NEEDED BETWEEN HAUL ROADS AND FILL AREA

COMMENTS: GRADER TRIMMING UP AREAS THAT HAVE FILL PLACED AND WILL DO A LATER DATE

Signed: Date: 02/11/17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System™ Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	194
Location:	Marsden Park	Report Date:	03/11/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 12	TEST NO'S 3790 – 3809/20
APPROVED SUBGRADE	SUBGRADE 15	TEST NO'S 3810 – 3815/6

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

2x 631 SCRAPERS PUSHED BY D10 MATERIAL CUT AND PLACED [illegible] IN APPROVED (54)15
ALSO 2x 627 SCRAPERS PLACING IN THE SAME AREA WHILE 825 COMPACTS AND PUSHES WEST TOWARDS STONEY CREEK ROAD
SUBGRADE 18 PICKED UP RUNS UP AGAINST FACE OPPOSITE (54)15

5. Instructions given on site

CUT TO FILL WILL START AT SOME POINT TODAY TO CREATE WATER RUNOFF AREA AS RAIN FORCAST
2x 631 SCRAPERS BOXING OUT ROADS IN AREA WITH GRADER MATERIAL PICKED UP AS FILL IS BEING PLACED IN APPROVED SUBGRADE (03) 815 PUSHING SPREAD

COMMENTS: MATERIAL OVER PAD FOR FURTHER LAYER
2x 631 SCRAPERS CARTING RIPPED MATERIAL FROM BORROW ZONE (54)12 AND PLACING AT THE LOW END OF (54)12 NEAR CULVERT E046 825 COMPACTING AS PLACED

Signed: [signature]

Date: 03-11-17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	195
Location:	Marsden Park	Report Date:	07 / 11 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: –

Time off site: –

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS: Due to earlier rain, the job has been postponed to a later date as site access is unsafe for tyred vehicles to safely carry out tasks.

Signed: Date: 08.11.17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	196
Location:	Marsden Park	Report Date:	06/11/2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: –

Time off site: –

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS: Due to earlier rain, the job has been postponed to a later date as site access is unsafe for tyred vehicles to safely carry out tasks.

Signed: Date: 06.11.17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	197
Location:	Marsden Park	Report Date:	08 / 11 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630
Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

GRADER TRIMMING UP AND GETTING READY FOR ROLLING WITH SMOOTH DRUM OVER CULVERT IN AREA(D) EXCESS MATERIEL PICKED UP AND PLACED IN S4(13) WHERE 825 COMPACTOR IS ROLLING
2x 631'S CUTTING MATERIEL FROM AREA OPPOSITE SITE SHEDS AND PLACED IN EG/13

5. Instructions given on site

ALSO IN THE DAM AREA WITH ANOTHER 825 PUSHING AND COMPACTING TO THE WEST DOWN BATTER
D6 DOZER RIPPING FOR THE 627 SCRAPERS x10 2x GRADERS TRIMMING PADS AND HAUL ROADS FROM PREVIOUS RAIN DAYS APPROX 30MM RAIN SOME

COMMENTS: AREAS ARE VERY WET AND HARD TO ACCESS

Signed: Date: 08-11-17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	198
Location:	Marsden Park	Report Date:	09 /11 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630
Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 19	TEST NO'S 3828 - 3850 / 23
DAM AREA	NO APPROVED SUBGRADE	TEST NO'S 3816 - 3827 / 12

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

D8 DOZER RIPPING CUT AREA IN (S4) 19 FOR THE DIO TO PUSH 2x 631 SCRAPERS AND PLACE IN FILL AREA DESIGNATED (19)
ALONG WITH 5x 627 SCRAPERS CUTTING WHILE LOOKED UP AND PLACING IN FILL AREA 2x 825 COMPACTORS PUSHING ALONG MARKED IN APPROX 300MM LAYERS

5. Instructions given on site

WHILE GRADER RUNNING A BLADE OVER THE TOP FOR FASTER TURN AROUND 5x 627 SCRAPERS STRIPPING PROPOSED FILL AREA ALL ORGANIC MATERIAL IS STOCKPILED FOR USE AT A LATER DATE

COMMENTS:

Signed: Date: 09.11.17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	199
Location:	Marsden Park	Report Date:	10 / 11 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 19	TEST NOS 3851 - 3873 / 25

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

3X 6?T SCRAPERS STRIPPING PROPOSED SUBGRADE (20) MATERIAL [illegible] STOCKPILED FOR USE OF A LATER DATE ON FILL AREAS
ALSO 2X 631 SCRAPERS CARTING [illegible] RIPPED MATERIAL FROM HIGH POINT IN (54)17 AND PLACING IN [illegible] (19)

5. Instructions given on site

1X 825 ROLLING AND COMPACTING RIPPED SCRAPER [illegible] FROM CUT (54)17
4X 631 SCRAPERS WORKING THIS AREA FOR THE TIME BEING,
GRADER [illegible] SMALL AREA [illegible] SCRAPERS REMOVE [illegible] MATERIAL
WHERE THE ROAD WILL RUN THROUGH EAST APPROX 100M BEHIND OFFICE

COMMENTS: CONTROLLED MATERIAL WILL BE PLACED USING 825 IN 150MM LAYERS

Signed:

Date: 10-11-17

m

GEOTECH TESTING PTY LTD®

ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

SUBGRADE APPROVAL REPORT

Client: Daracon Contractors Pty Ltd	Project No: 8599/1
Project: Woorong Bulk Earthworks	Report No: S 16
Location: Marsden Park	Report Date: 12·10 / /2017
Subgrade Inspection Report	Technician: Heath Wilson

Subgrade areas assessed

Area ID	Date	Approximate extent	Subgrade Description	Geometry Summary	Survey Reference	Approved (Yes/No)
8599/1 - SUBGRADE 16	12.10.17	38218 m² 9444 ACRES	F/CLAY MED FIRST GROWN ORANGE MED GRAVEL, ALL ORGANIC MATERIAL	LARGE RECTANGLE SLIGHT SLOPE TOWARDS THE WEST (80Y)		Y
			STRIPPED AND STOCKPILED FOR LATER USE			

COMMENTS:

Signed: [signature]

Date: 12.10.17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

SUBGRADE APPROVAL REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	S 17
Location:	Marsden Park	Report Date:	30 /10/2017
Subgrade Inspection Report		Technician:	Heath Wilson

Subgrade areas assessed

Area ID	Date	Approximate extent m2	Subgrade Description	Geometry Summary	Survey Reference	Approved (Yes/No)
SUBGRADE 17 8599/1.17	30/10/17	16573.682 4.0% ALLE	ALL TOPSOIL REMOVED AND STOCKPILED FOR FUTURE USE MATERIAL IS A (CL) CLAY	LONG RECTANGLE SHAPE TO SYDNEY CK ROAD		Y
			MED PINK/ORANGE MED GRAVEL			

COMMENTS:

Signed: Date: 30/10/17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

SUBGRADE APPROVAL REPORT

Client: Daracon Contractors Pty Ltd	Project No: 8599/1
Project: Woorong Bulk Earthworks	Report No: S 18
Location: Marsden Park	Report Date: 03-11 / /2017
Subgrade Inspection Report	Technician: Heath Wilson

Subgrade areas assessed

Area ID	Date	Approximate extent	Subgrade Description	Geometry Summary	Survey Reference	Approved (Yes/No)
SUBGRADE 18 8599/E-18	03/11/17	20142 m² 4.977 ACRE	ALL TOPSOIL AND ORGANIC MATERIAL STOCKPILED (CL) CLAY MED DARK ORANGE BROWN MED GRAVEL	RECTANGLE SHAPE FALLING TO THE WEST SYDNEY CK ROAD		Y

COMMENTS:

Signed: Date: 03/11/17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

SUBGRADE APPROVAL REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	S 19
Location:	Marsden Park	Report Date:	09/11/2017
Subgrade Inspection Report		Technician:	Heath Wilson

Subgrade areas assessed

Area ID	Date	Approximate extent	Subgrade Description	Geometry Summary	Survey Reference	Approved (Yes/No)
SUBGRADE 19 8599/1-19	09/11/17	76021m² 18.785 ACR	R1) CLAY MED PLAST BROWN MED TO HIGH GRADES/ROCK	SQUARE SHAPE BATTERS TO THE EAST		Y

COMMENTS:

Signed: Date: 09/11/17

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

Our Ref: 8599/1-R15
30 April 2018

Daracon Contractors Pty Ltd
P O Box 6145
SILVERWATER BC NSW 1811
Email: SimpsonW@daracon.com.au

Attention: Mr S Wong

Dear Sir

Re: **Woorong Bulk Earthworks**
Marsden Park
Monthly Site Filling Certificate – April 2018

For the production period 21 March to 19 April 2018, inclusive, we submit our Geotech Monthly Report for the above project.

During the foregoing testing period, a total of one hundred & forty nine compaction control tests (Tests 5773 to 5921, inclusive) were carried out and reported. The locations of the 218 tests are shown on the attached Drawing Nos 8599/1-96 to 8599/1-99, inclusive (4 drawings). All tests have been undertaken in accordance with the Test Methods and Specifications shown on the attached certificates. Scanned daily records and subgrade reports are also attached.

Based on the fill quantities/survey data, the frequency of field density and compaction tests was in accordance with Level 1 as defined in AS3798 “Guidelines on Earthworks for Commercial & Residential Development”. We certify that all tested locations attained the density ratio shown on the test results sheets. Where failures were encountered, the areas were re-worked and re-tested to achieve the specified density ratio.

Based on site observations and testing, it is considered that the fill placed to date at the locations shown on the attached drawings is classified as "Controlled" fill and that the specified compaction level has been achieved within the tested area.

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully
GEOTECH TESTING PTY LTD

Adrian Kench
Laboratory Manager

Attached Density Test Results Certificates Tests 5773 to 5921
Test Location Drawings 8599/1-96 to 8599/1-99
Daily Records

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5773	5774	5775	5776	5777	5778	5779	5780
DATE TESTED			28/03/2018							
RESULTS										
Hilf Density Ratio	Standard	%	96	95	95.5	96.5	97	95	95	95.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295996.108	295997.311	295997.664	295994.479	295989.869	295998.226	296002.825	296005.928
Northing			6268569.927	6268611.335	6268652.058	6268690.794	6268720.377	6268734.361	6268701.073	6268665.815
Reduced Level		m	22.663	22.751	23.092	22.983	22.323	22.24	22.818	22.979
Shown on Drawing No			8599/1-99	8599/1-98						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.04	2.06	2.09	2.10	2.07	2.06	2.07
Field Moisture Content		%	15.0	16.5	17.0	16.0	15.5	15.5	15.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5773	5774	5775	5776	5777	5778	5779	5780
Peak Converted Wet Density		t/m³	2.17	2.15	2.16	2.17	2.16	2.18	2.17	2.17
Apparent Optimum Moisture Content		%	14.5	15.5	16.5	16.0	15.5	15.5	15.0	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5781	5782	5783	5784	5785	5786	5787	5788
DATE TESTED			28/03/2018							
RESULTS										
Hilf Density Ratio	Standard	%	95.5	97	96.5	95.5	98	96.5	95	97
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296007.576	296007.874	296011.528	296031.929	296030.23	296025.336	296019.038	296016.024
Northing			6268636.257	6268599.751	6268569.555	6268578.028	6268613.169	6268645.311	6268685.921	6268720.483
Reduced Level		m	23.177	22.984	22.942	23.175	23.279	23.097	22.935	22.535
Shown on Drawing No			8599/1-98	8599/1-99			8599/1-98			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.10	2.09	2.06	2.12	2.10	2.06	2.09
Field Moisture Content		%	15.5	15.0	15.0	14.0	15.5	16.0	16.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5781	5782	5783	5784	5785	5786	5787	5788
Peak Converted Wet Density		t/m³	2.18	2.16	2.17	2.16	2.16	2.18	2.17	2.16
Apparent Optimum Moisture Content		%	15.5	15.0	15.0	14.0	15.5	16.0	16.0	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5789	5790	5791	5792	5793	5794	5795	5796
DATE TESTED			28/03/2018						29/03/2018	
RESULTS										
Hilf Density Ratio	Standard	%	95.5	96.5	95.5	96.5	97	96	101	98
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296022.956	296035.792	296041.714	296046.939	296051.023	296052.824	296090.147	296089.833
Northing			6268742.023	6268726.872	6268689.102	6268652.285	6268615.67	6268579.941	6268502.061	6268537.396
Reduced Level		m	22.276	22.247	22.65	23.034	23.429	23.279	23.113	23.337
Shown on Drawing No			8599/1-98					8599/1-99		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.08	2.08	2.09	2.10	2.09	2.09	2.07
Field Moisture Content		%	15.0	14.0	16.0	14.0	15.5	15.5	15.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5789	5790	5791	5792	5793	5794	5795	5796
Peak Converted Wet Density		t/m³	2.17	2.16	2.18	2.17	2.16	2.18	2.07	2.11
Apparent Optimum Moisture Content		%	15.0	14.0	16.0	14.0	15.5	15.0	16.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5797	5798	5799	5800	5801	5802	5803	5804
DATE TESTED			29/03/2018							
RESULTS										
Hilf Density Ratio	Standard	%	99.5	98	99	99.5	98	99	101	99.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296089.689	296089.171	296087.395	296085.783	296082.497	296078.374	296092.619	296098.46
Northing			6268588.519	6268611.677	6268643.735	6268672.479	6268706.017	6268738.254	6268744.924	6268704.352
Reduced Level		m	23.07	23.561	23.441	22.935	22.596	22.095	21.921	22.461
Shown on Drawing No			8599/1-99	8599/1-98						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.07	2.07	2.09	2.06	2.07	2.12	2.09
Field Moisture Content		%	15.5	13.5	15.5	14.5	14.5	14.5	14.5	14.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5797	5798	5799	5800	5801	5802	5803	5804
Peak Converted Wet Density		t/m³	2.08	2.11	2.09	2.10	2.10	2.09	2.10	2.10
Apparent Optimum Moisture Content		%	16.5	14.0	16.5	15.0	15.5	15.0	15.5	14.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5805	5806	5807	5808	5809	5810	5811	5812
DATE TESTED			29/03/2018							
RESULTS										
Hilf Density Ratio	Standard	%	97	96.5	97.5	96.5	96.5	95.5	97	95.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**-0.5**	**0.0**	**0.0**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296104.388	296110.285	296118.632	296134.928	296133.503	296131.801	296126.387	296120.83
Northing			6268673.695	6268645.331	6268582.242	6268576.517	6268608.431	6268636.977	6268676.482	6268709.973
Reduced Level		m	22.898	23.43	23.466	23.392	23.58	23.627	23.011	22.709
Shown on Drawing No			8599/1-98		8599/1-99		8599/1-98			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.08	2.08	2.06	2.07	2.07	2.11	2.09
Field Moisture Content		%	15.5	15.5	16.5	16.0	15.0	15.0	14.5	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5805	5806	5807	5808	5809	5810	5811	5812
Peak Converted Wet Density		t/m³	2.11	2.15	2.13	2.14	2.15	2.17	2.18	2.19
Apparent Optimum Moisture Content		%	15.5	16.0	16.5	16.0	16.0	15.5	15.5	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5813	5814	5815	5816	5817	5818	5819	5820
DATE TESTED			03/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	104.5	104	103	101	105	105	104.5	101
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**-0.5**	**0.0**	**-0.5**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296119.522	296131.94	296134.801	296143.966	296150.117	296103.649	296103.536	296104.903
Northing			6268756.056	6268741.608	6268710.616	6268662.589	6268621.357	6268565.432	6268542.254	6268503.98
Reduced Level		m	21.836	22.244	22.717	23.324	23.796	23.727	23.74	23.563
Shown on Drawing No			8599/1-98					8599/1-99		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.08	2.09	2.07	2.09	2.12	2.08	2.06
Field Moisture Content		%	15.5	16.5	17.5	16.0	15.0	15.0	16.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5813	5814	5815	5816	5817	5818	5819	5820
Peak Converted Wet Density		t/m³	1.97	2.00	2.03	2.05	1.99	2.02	1.99	2.04
Apparent Optimum Moisture Content		%	15.0	16.5	18.0	16.0	15.5	14.5	16.0	15.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5821	5822	5823	5824	5825	5826	5827	5828
DATE TESTED			06/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	100	104	101	102	103.5	104	101	101
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**-0.5**	**0.0**	**-0.5**	**0.0**	**0.0**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296147.705	296144.455	296140.512	296139.393	296150.508	296156.06	296161.05	296163.948
Northing			6268611.083	6268651.303	6268706.339	6268736.266	6268761.758	6268715.472	6268660.726	6268627.348
Reduced Level		m	23.942	24.022	23.363	23.078	22.537	23.323	23.984	24.074
Shown on Drawing No			8599/1-98							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.08	2.05	2.08	2.06	2.10	2.09	2.03
Field Moisture Content		%	14.5	14.5	14.5	15.0	14.0	14.5	14.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5821	5822	5823	5824	5825	5826	5827	5828
Peak Converted Wet Density		t/m³	2.06	2.00	2.03	2.04	1.99	2.02	2.07	2.01
Apparent Optimum Moisture Content		%	14.5	15.0	14.5	15.5	14.0	14.5	15.0	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5829	5830	5831	5832	5833	5834	5835	5836
DATE TESTED			06/04/2018					07/04/2018		
RESULTS										
Hilf Density Ratio	Standard	%	104	102	100	102	103	101.5	103	101
Moisture Variation from OMC (-Drier/+Wetter)		%	**-0.5**	**0.5**	**0.0**	**0.0**	**-0.5**	**-0.5**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296182.098	296173.278	296168.32	296179.885	296191.426	296212.882	296205.897	296211.368
Northing			6268629.437	6268698.228	6268744.888	6268763.816	6268721.13	6268636.547	6268652.963	6268692.203
Reduced Level		m	23.426	23.666	23.041	22.507	23.322	23.041	23.006	23.542
Shown on Drawing No			8599/1-98							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.05	2.07	2.11	2.02	2.07	2.06
Field Moisture Content		%	15.0	15.0	15.5	14.0	15.0	14.0	14.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5829	5830	5831	5832	5833	5834	5835	5836
Peak Converted Wet Density		t/m³	1.99	2.02	2.05	2.03	2.05	1.99	2.01	2.04
Apparent Optimum Moisture Content		%	15.5	14.5	15.0	13.5	15.0	15.0	14.5	14.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5837	5838	5839	5840	5841	5842	5843	5844
DATE TESTED			07/04/2018			09/04/2018			
RESULTS										
Hilf Density Ratio	Standard	%	104.5	104	104	103.5	104.5	99.5	100.5	99.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**-0.5**	**0.0**	**0.0**	**-1.0**	**-1.0**	**0.0**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296207.141	296206.396	296201.909	296027.702	296028.145	296012.204	296001.582	295970.441
Northing			6268709.886	6268669.718	6268639.13	6268577.804	6268542.12	6268521.811	6268558.905	6268550.284
Reduced Level		m	23.104	23.403	23.327	23.735	23.121	22.696	23.292	23.022
Shown on Drawing No			8599/1-98			8599/1-99				
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.07	2.07	2.06	2.09	2.08	2.00
Field Moisture Content		%	15.0	13.5	14.5	14.5	14.0	14.5	14.5	14.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5837	5838	5839	5840	5841	5842	5843	5844
Peak Converted Wet Density		t/m³	1.98	1.98	1.99	2.00	1.97	2.10	2.07	2.01
Apparent Optimum Moisture Content		%	15.5	13.5	14.5	15.0	15.0	15.0	15.0	14.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	1-2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5845	5846	5847	5848	5849	5850	5851	5852
DATE TESTED			09/04/2018						10/04/2018	
RESULTS										
Hilf Density Ratio	Standard	%	99.5	101.5	102.5	102.5	100	102.5	103.5	101
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**-0.5**	**0.0**	**0.0**	**0.0**	**-0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295944.175	296218.296	296218.778	296236.395	296228.435	296241.353	296225.726	296229.914
Northing			6268547.177	6268606.504	6268555.558	6268540.164	6268568.727	6268580.655	6268571.202	6268538.221
Reduced Level		m	22.766	23.539	23.811	23.949	23.712	23.718	23.592	23.984
Shown on Drawing No			8599/1-99							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.05	2.04	2.09	2.08	2.10	2.07	2.06
Field Moisture Content		%	14.5	15.0	15.0	13.5	14.0	14.0	14.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5845	5846	5847	5848	5849	5850	5851	5852
Peak Converted Wet Density		t/m³	2.08	2.02	1.99	2.04	2.08	2.05	2.00	2.04
Apparent Optimum Moisture Content		%	14.5	14.5	15.5	13.5	14.0	14.0	15.0	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	1-2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5853	5854	5855	5856	5857	5858	5859	5860
DATE TESTED			10/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	100.5	102	101.5	100	100.5	102	103.5	99.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**-0.5**	**0.0**	**1.0**	**-0.5**	**-0.5**	**-1.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296258.669	296279.974	295960.477	296003.91	295992.348	295959.725	296016.84	295972.991
Northing			6268536.326	6268565.459	6268677.006	6268683.223	6268698.638	6268703.489	6268722.077	6268475.765
Reduced Level		m	24.036	23.548	24.159	24.096	23.635	23.376	23.153	22.22
Shown on Drawing No			8599/1-99				8599/1-98			8599/1-99
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.09	2.08	2.09	2.10	2.11	2.12	2.07
Field Moisture Content		%	14.5	14.5	14.5	14.5	14.5	15.0	14.0	14.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5853	5854	5855	5856	5857	5858	5859	5860
Peak Converted Wet Density		t/m³	2.07	2.05	2.05	2.09	2.09	2.07	2.05	2.08
Apparent Optimum Moisture Content		%	14.0	15.0	14.5	13.5	14.5	15.5	15.0	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	1-2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5861	5862	5863	5864	5865	5866	5867	5868
DATE TESTED			10/04/2018		11/04/2018					
RESULTS										
Hilf Density Ratio	Standard	%	101.5	99.5	96.5	97	98.5	99.5	97	100.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**-0.5**	**0.5**	**-0.5**	**0.5**	**0.5**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295970.529	295945.879	296103.146	296099.765	296108.532	296117.671	296140.379	296140.806
Northing			6268445.807	6268459.349	6268690.574	6268723.484	6268741.978	6268706.325	6268694.808	6268736.807
Reduced Level		m	22.075	21.987	24.09	23.739	23.417	24.004	24.403	23.889
Shown on Drawing No			8599/1-99		8599/1-98					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.08	2.07	2.09	2.10	2.11	2.08	2.10
Field Moisture Content		%	14.0	15.0	15.5	14.5	16.5	16.5	17.0	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5861	5862	5863	5864	5865	5866	5867	5868
Peak Converted Wet Density		t/m³	2.05	2.09	2.14	2.15	2.13	2.12	2.14	2.09
Apparent Optimum Moisture Content		%	14.5	15.5	15.5	15.0	16.0	16.0	16.5	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5869	5870	5871	5872	5873	5874	5875	5876
DATE TESTED			11/04/2018				13/04/2018			
RESULTS										
Hilf Density Ratio	Standard	%	100	96	100.5	98	98.5	98.5	96	98.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**-0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			295994.402	295996.235	296021.901	296023.042	296145.993	296138.237	296132.504	296162.872
Northing			6268637.454	6268607.989	6268608.511	6268641.194	6268624.786	6268687.781	6268745.436	6268693.314
Reduced Level		m	23.969	23.856	23.939	24.149	24.699	24.775	23.302	24.468
Shown on Drawing No			8599/1-98							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.06	2.12	2.09	2.09	2.11	2.05	2.09
Field Moisture Content		%	18.0	15.5	17.0	18.0	17.5	20.0	16.0	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5869	5870	5871	5872	5873	5874	5875	5876
Peak Converted Wet Density		t/m³	2.11	2.15	2.11	2.13	2.12	2.14	2.13	2.12
Apparent Optimum Moisture Content		%	18.0	15.5	16.5	17.5	17.0	19.5	16.0	18.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5877	5878	5879	5880	5881	5882	5883	5884
DATE TESTED			13/04/2018				17/04/2018			
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97.5	96.5	96.5	97.5	97	97	96.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.5**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			296182.966	296187.349	296186.114	296210.629	294810.136	294769.051	294803.169	294793.445
Northing			6268629.294	6268686.986	6268751.359	6268711.759	6268708.492	6268718.008	6268730.049	6268751.866
Reduced Level		m	24.407	24.341	23.336	23.803	16.869	16.43	16.339	16.278
Shown on Drawing No			8599/1-98				8599/1-97			
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.08	2.08	2.06	2.08	2.07	2.06	2.06
Field Moisture Content		%	17.0	16.0	15.5	15.5	15.5	19.5	17.5	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5877	5878	5879	5880	5881	5882	5883	5884
Peak Converted Wet Density		t/m³	2.14	2.13	2.15	2.14	2.13	2.13	2.12	2.13
Apparent Optimum Moisture Content		%	16.5	16.0	15.5	15.0	16.0	19.0	17.0	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5885	5886	5887	5888	5889	5890	5891	5892
DATE TESTED			17/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	99	97	97	98	97	96.5	97	98
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.5**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294759.576	294783.895	294815.367	294802.464	294766.47	294803.249	294826.429	294777.298
Northing			6268762.643	6268778.125	6268785.68	6268815.335	6268826.885	6268841.643	6268861.446	6268875.181
Reduced Level		m	16.313	16.171	16.098	16.025	16.027	15.665	15.263	15.563
Shown on Drawing No			8599/1-97						8599/1-96	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.09	2.08	2.06	2.06	2.07	2.09	2.09
Field Moisture Content		%	15.5	16.5	16.5	18.0	16.0	17.0	17.0	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5885	5886	5887	5888	5889	5890	5891	5892
Peak Converted Wet Density		t/m³	2.13	2.15	2.14	2.10	2.12	2.14	2.16	2.13
Apparent Optimum Moisture Content		%	15.0	16.0	16.0	17.5	15.5	16.5	17.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5893	5894	5895	5896	5897	5898	5899	5900
DATE TESTED			17/04/2018					18/04/2018		
RESULTS										
Hilf Density Ratio	Standard	%	97.5	96.5	98.5	95.5	98	98.5	98.5	99.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.5**	**0.5**	**0.0**	**0.5**	**0.0**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294809.081	294828.651	294794.408	294773.964	294829.722	294833.478	294794.787	294787.058
Northing			6268876.308	6268893.764	6268900.547	6268919.496	6268914.955	6268919.558	6268920.447	6268945.007
Reduced Level		m	15.404	15.131	15.403	15.219	15.045	14.897	15.356	15.11
Shown on Drawing No			8599/1-96							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.06	2.07	2.10	2.06	2.10	2.11	2.10	2.08
Field Moisture Content		%	18.0	19.0	16.0	16.5	13.5	17.0	19.5	19.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5893	5894	5895	5896	5897	5898	5899	5900
Peak Converted Wet Density		t/m³	2.11	2.14	2.13	2.16	2.14	2.14	2.13	2.09
Apparent Optimum Moisture Content		%	17.5	19.0	16.0	16.0	13.0	17.0	19.0	19.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	1	2	2	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5901	5902	5903	5904	5905	5906	5907	5908
DATE TESTED			18/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	98.5	96	98	98	98	97	97.5	98.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.5**	**0.5**	**0.5**	**0.0**	**0.5**	**0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294840.294	294825.379	294781.847	294796.217	294835.485	294803.919	294818.919	294864.635
Northing			6268935.983	6268955.665	6268966.632	6268992.477	6268989.494	6269012.289	6269024.269	6269019.62
Reduced Level		m	14.792	14.954	15.167	15.107	14.912	14.907	14.78	14.009
Shown on Drawing No			8599/1-96							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.07	2.10	2.12	2.09	2.08	2.10	2.09
Field Moisture Content		%	18.0	17.5	17.5	19.5	18.0	19.0	17.0	20.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5901	5902	5903	5904	5905	5906	5907	5908
Peak Converted Wet Density		t/m³	2.11	2.16	2.14	2.16	2.13	2.14	2.15	2.12
Apparent Optimum Moisture Content		%	18.0	17.0	17.0	19.0	17.5	18.5	17.0	20.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2-3

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5909	5910	5911	5912	5913	5914	5915	5916
DATE TESTED			19/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	101	100.5	100	98.5	100	98.5	102	99
Moisture Variation from OMC (-Drier/+Wetter)		%	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-1.0**	**-0.5**	**-0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294826.539	294826.431	294816.684	294802.438	294804.026	294790.831	294796.982	294814.015
Northing			6268969.961	6268941.423	6268894.961	6268859.773	6268817.292	6268776.359	6268726.956	6268709.904
Reduced Level		m	15.563	15.611	15.98	16.241	16.526	17.037	17.326	17.386
Shown on Drawing No				8599/1-96				8599/1-97		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.08	2.09	2.07	2.11	2.08	2.07	2.07
Field Moisture Content		%	15.5	16.0	17.5	16.5	18.5	20.0	17.5	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5909	5910	5911	5912	5913	5914	5915	5916
Peak Converted Wet Density		t/m³	2.06	2.07	2.09	2.10	2.11	2.11	2.03	2.09
Apparent Optimum Moisture Content		%	16.5	16.5	18.5	17.5	19.5	21.0	18.5	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2-3	2-3	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 30/04/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER		5917	5918	5919	5920	5921			
DATE TESTED		19/04/2018							
RESULTS									
Hilf Density Ratio Standard	%	99.5	101.5	101.5	99.5	101.5			
Moisture Variation from OMC (-Drier/+Wetter)	%	**-1.0**	**-1.0**	**-0.5**	**-0.5**	**-0.5**			
Specification **Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION									
Easting		294816.046	294831.287	294831.046	294845.159	294848.245			
Northing		6268756.884	6268808.011	6268864.978	6268910.207	6268964.759			
Reduced Level	m	16.909	16.326	15.947	15.35	14.988			
Shown on Drawing No		8599/1-97		8599/1-96					
Retested by Test		-	-	-	-	-			
FIELD & LABORATORY DATA									
Field Wet Density	t/m³	2.07	2.09	2.09	2.07	2.11			
Field Moisture Content	%	20.0	16.5	15.5	17.5	14.5			
Material retained on 19mm Sieve (wet)	%	<5	<5	<5	<5	<5			
Lab Compaction result from test number		5917	5918	5919	5920	5921			
Peak Converted Wet Density	t/m³	2.08	2.06	2.06	2.08	2.08			
Apparent Optimum Moisture Content	%	20.5	17.5	16.5	18.5	15.0			
Number of Compaction Points		3	3	3	3	3			
Test Procedures - See Note Number		12	12	12	12	12			
Material Description - see below		2-3	2	2	2	2			

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

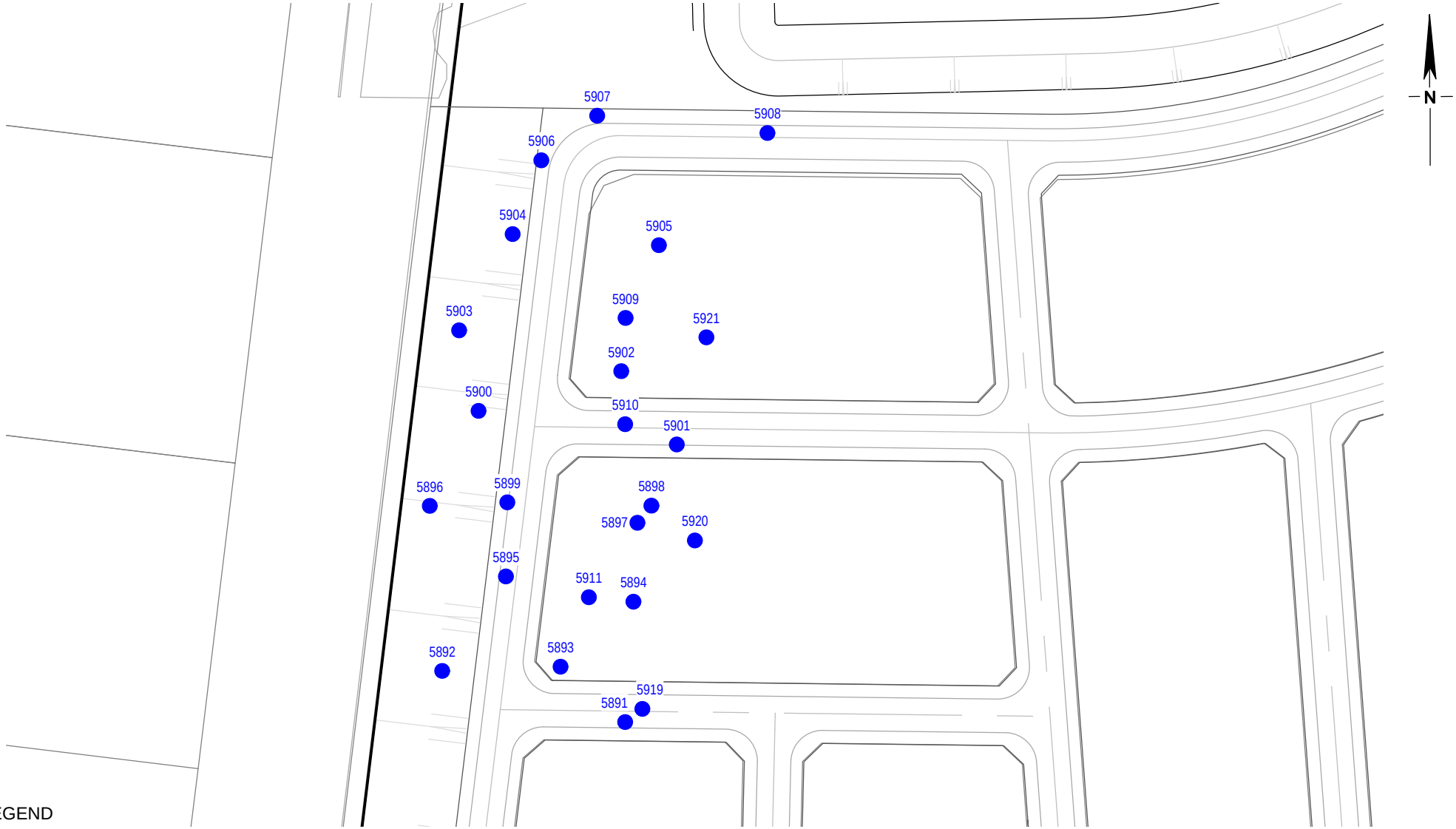
Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 30/04/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au



LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321

Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-96
Job No: 8599/1
Drawn By: MH
Date: 27 April 2018
Checked By: AK

File No: 8599-1
Layers: 0, Lay96

LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-97
Job No: 8599/1
Drawn By: MH
Date: 27 April 2018
Checked By: AK

File No: 8599-1
Layers: 0, Lay97

LEGEND

● Density Test

GEOTECH TESTING PTY LTD ®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

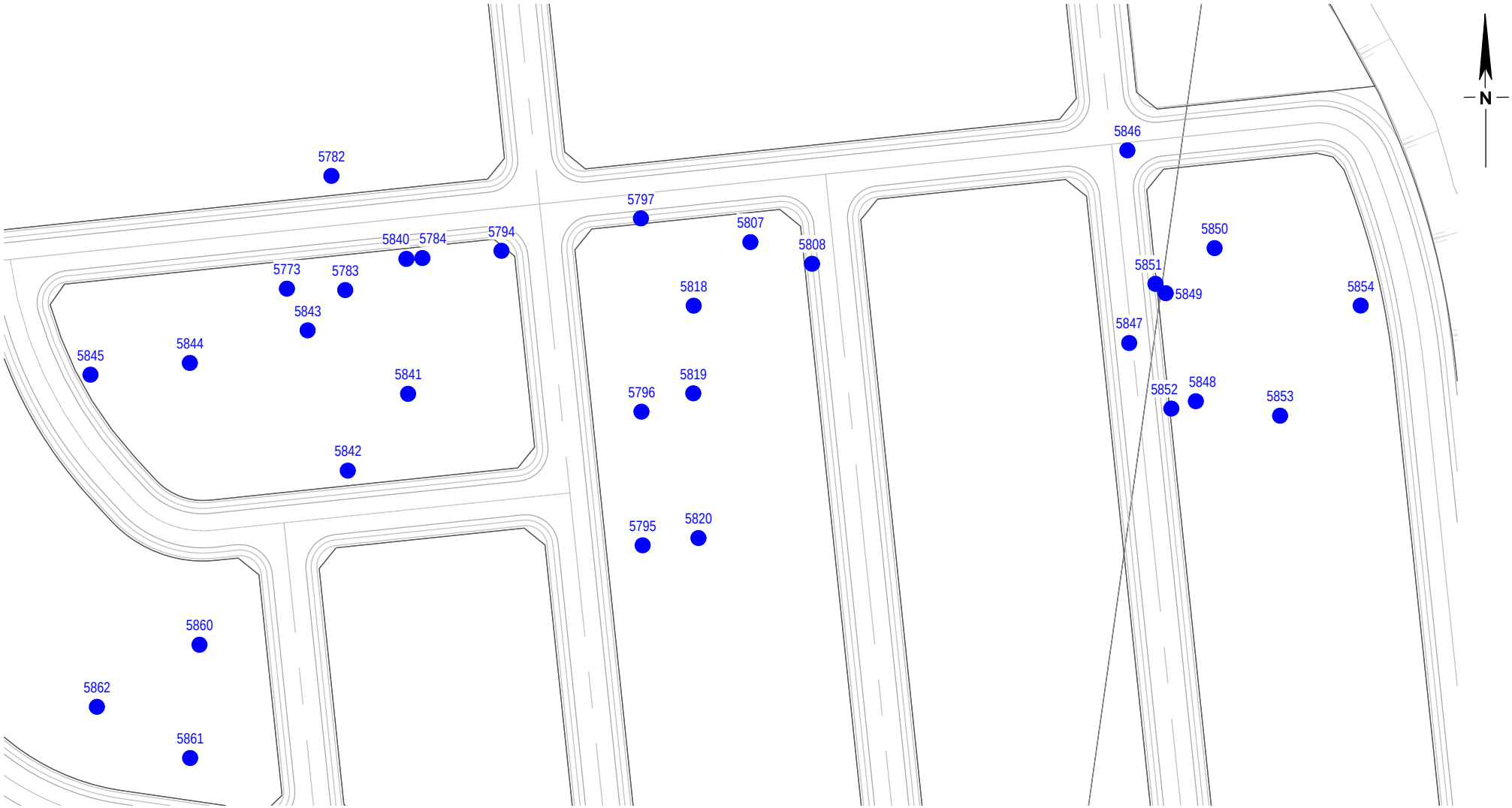
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-98
Job No: 8599/1
Drawn By: MH
Date: 27 April 2018
Checked By: AK

File No: 8599-1
Layers: 0, Lay98



LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-99
Job No: 8599/1
Drawn By: MH
Date: 27 April 2018
Checked By: AK

File No: 8599-1
Layers: 0, Lay99

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	265
Location:	Marsden Park	Report Date:	21 /03 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site:

Time off site:

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS: DUE TO RAIN SITE IS UNSUITABLE FOR TYRED VEHICLES.
GRADER WILL TRIM HAUL ROADS FOR ACCESS IN THE FOLLOWING DAYS

Signed: Date: 21-03-18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	266
Location:	Marsden Park	Report Date:	22/03/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site:

Time off site:

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS: DUE TO RAIN SITE IS UNSUITABLE FOR TYRED VEHICLES.
GRADER WILL TRIM HAUL ROADS FOR ACCESS IN THE FOLLOWING DAYS

Signed: Date: 22.03.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	267
Location:	Marsden Park	Report Date:	23 / 08 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site:

Time off site:

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS: DUE TO RAIN SITE IS UNSUITABLE FOR TYRED VEHICLES.
GRADER WILL TRIM HAUL ROADS FOR ACCESS IN THE FOLLOWING DAYS

Signed: Date: 23-08-18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	268
Location:	Marsden Park	Report Date:	26/09/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site:

Time off site:

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMMENTS: DUE TO RAIN SITE IS UNSUITABLE FOR TYRED VEHICLES.
GRADER WILL TRIM HAUL ROADS FOR ACCESS IN THE FOLLOWING DAYS

Signed: Date: 26.09.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

265

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/81
Project:	Woorong Bulk Earthworks	Report No:	269
Location:	Marsden Park, Precinct 2	Report Date:	28/03/~~2017~~ 2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5200

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 12	TEST NO'S 5773 - 5794/22

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

FIRST DAY BACK ROAD TRUCKS CARRYING OUT TO RAIN AND WET FILL AREA / HAUL ROADS
IMPORT CARTED TO (S4)12 2x 825 COMPACTORS PUSHING MATERIAL PUSHED OF THE FACE 2x DOZERS CLEANING UP TOES TO FSL

5. Instructions given on site

COMMENTS:

Signed: Date: 28.03.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	270
Location:	Marsden Park	Report Date:	29 /03 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5.00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE , 12	TEST NO'S 5795-~~5820~~ 5812 /18
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

GRADER CONTINUES TO CUT HAUL ROADS FOR TRUCK ACCESS TO SANDSTONE AND FILL STOCKPILES
ALSO TRIMMING FINISHED PADS READY FOR THE GRASS TRACTOR TO SEED READY FOR SIGN OF

5. Instructions given on site

IMPORT MATERIAL PLACED IN (S4) 12 2x COMPACTORS PUSHING MATERIAL INTO THE FACE AS PAD IS STILL SOFT FROM PREVIOUS RAIN DAYS
06 DOZER PUSHING OUT WET SPOT SOUTH SIDE BOUNDY INTO

COMMENTS: THIN LAYER TO DRY AND WILL BECOME FINAL LAYER

Signed: Date: 29.03.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	271
Location:	Marsden Park	Report Date:	03/01/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5.00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S 5813 - 5820/8
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

COMPACTOR PUSHING AND COMPACTING PUSHED UP IMPORT FROM DOZER BOXING OUT ROADS IN 6A)12 ZONE C
GRADER TRIMMING BOXED OUT ROADS READY FOR SUBGRADE REPLACEMENTS WITH STOCKPILED SANDSTONE FROM PREVIOUS EARLIER DATES

COMMENTS: NO IMPORT TRUCKS COMING TODAY CLEAN UP AND SURVEY FOR BULK M3

Signed: Date: 03.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	272
Location:	Marsden Park	Report Date:	04 /04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

2x DOZERS RIPPING FSL FOR ROAD BOXING TO PREPARE FOR SANDSTONE REPLACEMENT FROM PREVIOUSLY STOCKPILED MATERIEL WHILST PAD FOOT ROLLER COMPACTS AS GRADER WILL TRIM THEN SMOOTH DRUM WILL SEAL WITH WATERCART

COMMENTS: SANDSTONE SAMPLES TAKEN FROM STOCKPILE FOR ASSIGNED VALUE ON ROADS
COMPACTOR ROLLING PUSHED OUT FILL FROM DOZERS MATERIEL WILL BE TESTED NEXT DAY AS LAYER BUILDS UP

Signed: Date: 04-04-18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	273
Location:	Marsden Park	Report Date:	05 /04 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630
Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

IMPORT TRUCKS CARTING MATERIEL TO ZONE(C) SUBGRADE(12)
MATERIEL PLACED SOUTH END ON FACE AND WORKED WEST PUSHED OF THE FACE FOR LOT (FSC)
2X DOZERS COMMENCE BOXING OF ROADS EXCESS MATERIEL

5. Instructions given on site

IS PUSHED INTO FILL AREA AND USED AS FINAL LAYER FOR TOPSOIL PLACEMENT
GRADER TRIMMING SIDE ROADS ENTRY AND EXIT ROADS ALSO TRUCKS WILL NEED SEAL SUBGRADE ROADS AS THEY EXIT

COMMENTS: TO MANY IMPORT TRUCKS TO SAFELY CARRY OUT DENSITYS WILL TRY 06-04-18

Signed: Date: 05-04-18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	274
Location:	Marsden Park	Report Date:	06 / 04 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5-00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE , 12	TEST NO'S 5821 - 5833/13
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARRING IMPORT MATERIEL TO (SG) 12 2 x COMPACTORS PUSHING PLACED MATERIEL OF THE NORTH BATTER TO REACH FSL IN AREAS GETTING READY FOR GRASS SEEDING TRACTOR SHALLOW HOLE EXCAVATED BY DIGGER MATERIEL WAS NOT SUITABLE

5. Instructions given on site

TO MET FOR SUBGRADE LEVEL
MATERIEL REMOVED WAS PLACED IN FILL AREA FOR USE OVER FARMED AREA
TRUCKS STOCKPILING SANDSTONE IN SG (12) ZONES FOR ROAD USE

COMMENTS: AREAS NEARING FSL IN ZONE (C) PROPOSED AREA WEST END OF (SG) 12 WILL HAVE IMPORT MATERIEL PLACED

Signed:

Date: 06.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	275
Location:	Marsden Park	Report Date:	07/04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 7 00
Time off site: 1 00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE , 12	TEST NO'S 5834 - 5839/6
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

IMPORT MATERIEL TRUCKS CARTING TO S4(12) 2x COMPACTORS PUSHING OF TAKE TO THE NORTH
2x DOZERS BOXING OUT ROADS ALSO WITH TRUCKS STOCKPILING SANDSTONE FOR SUBGRADE REPLACEMENT WHEN MATERIL IS

COMMENTS: REMOVED WITH EXCAVATOR AND DUMPTRUCKS GRADER TRIMMING PADS AND BOXED OUT ROADS ALSO WITH SMALL DOZER

Signed: Date: 07.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	276
Location:	Marsden Park	Report Date:	09/04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5.00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE , 12	TEST NO'S 5840 - 5850 / 11
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

IMPORT TRUCKS CARRYING TO SUBGRADE 12 TIPPING ON THE TOP LEVEL
2x COMPACTORS PUSHING OF THE BATE FOR FINAL LAYER
WATERCART SPRAYING LOADS IN BETWEEN LOADS ALONG WITH GRADER
ROLLING MATERIEL OVER TO MIX INTO FILL LAYER

5. Instructions given on site

EXCAVATOR LOADING TRUCKS WITH STOCKPILED SANDSTONE IM NOT
SURE OF DESTINATION IT APPEARS TO BE GOING OFF SITE

COMMENTS:

Signed: [signature] Date: 09.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	277
Location:	Marsden Park	Report Date:	10/04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE , 12	TEST NO'S 5851 - 5862/12
APPROVED SUBGRADE	SUBGRADE ,	TEST NO'S

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

IMPORT MATERIEL TRUCKS CARTING TO SUBGRADE 12 WHERE 2x COMPACTORS WORKING NORTH ALSO 2x DOZERS SPLITTING OUT ROADS READY FOR SUBGRADE REPLACEMENT
GRADER ALSO TRIMMING ROADS TO LEVEL WHILST WATERCART SPRAYS

COMMENTS:

Signed:

Date: 10-04-18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/~~X~~ 1
Project:	Woorong Bulk Earthworks	Report No:	278
Location:	Marsden Park, Precinct 3	Report Date:	11 /04 /2017
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 12	TEST NO'S 5863-5872/10

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARTING IMPORT MATERIEL TO (SG) 12 2 x COMPACTORS PUSHING NORTH ALONG FINAL LAYER
2x DOZERS BOXING OUT ROAD TO APPROX 100mm BELOW SUBGRADE
LEVEL PAD FOOT ROLLING MATERIEL AS ITS BOXED AND REMOVED

5. Instructions given on site

BACKFILLING SOUTH AND NORTH ENDS OF CULVERT FOR ROAD TO COVER SMALL VIBRATE ROLLER COMPACTING
2x 627 SCRAPERS HAULING TOPSOIL FROM STOCKPILES TO AREA RUNNING PARALLEL TO STONEY CK ROAD

COMMENTS:

Signed: Date: 11.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	279
Location:	Marsden Park	Report Date:	12/04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

IMPORT TRUCKS CARTING MATERIEL TO SUBGRADE 12 FOR FINAL LAYER EASTERN END TOWARDS OF CULVERT
2X COMPACTORS ALSO PROOFING AND COMPACTING WHILST WATERCART SPRAYS BETWEEN AND PLACED LOOSE

5. Instructions given on site

GRADER TRIMMING PADS TO GAS FSL READY FOR TOPSOILING 2X 627 SCRAPERS WILL PLACE STOCKPILED STOCKPILE SCRAPERS ALSO STRIPPING LONG RECTANGLE ALONG STONEY CREEK ROAD APPROX 1M FILL WILL BE CONTROLLED AS PLACED

COMMENTS: EXCAVATOR REMOVING UNSUITABLE MATERIEL FROM SOUTH END OF (S4)12 AS ROAD WILL BE PROPOSED TO PASS THROUGH THERE AND REPLACED AND CONTROLLED MATERIEL

Signed: Date: 12-04-18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	278
Location:	Marsden Park	Report Date:	13 / 04 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 12	TEST NO'S / 5873 - 5880/8
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

ROAD TRUCKS CARTING IMPORT MATERIEL TO (S4) 12 2x COMPACTORS PUSHING EAST TOWARDS CULVERT FOR FSL
2x DOZER'S BOXING OUT HAUL ROADS TO BE REPLACED WITH REPLACEMENT SUBGRADE WATER CART SPRAYS FOR TRIM

5. Instructions given on site

CULVERT BETWEEN STAGES 1 & 2 MATERIEL HAS BEEN PLACED AND CONTROLLED APPROX 1.2m IN DEPTH I WILL PLACE TEST LOCATIONS ON DRAWINGS FOR (LOT)
SCRAPER STILL STRIPPING AREA RUNNING PARALLEL TO STONEY CK RD

COMMENTS:

Signed: Date: 13.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

5880. 2940.000 m3

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	279
Location:	Marsden Park	Report Date:	16 / 04 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

SUBGRADE 12 IS NEARLY AT FSL OF ALL AREAS EXCEPT FOR EASTERN EDGE OF FILL AREA NEEDS APROX 200MM FOR FINAL LAYER SCRAPERS PUSHING SUBGRADE OVER (E4)12 FROM PREVIOUSLY STRIPPED STOCKPILED MATERIEL WHILST GRADER TRIMS TO LEVEL

5. Instructions given on site

NEW AREA OF FILL BEING PUSHED ALONG AREA PARALLEL TO STONEY CK ROAD 2x 627 SCRAPERS HAVE STRIPPED AND STOCKPILED MATERIEL. TRUCKS CARTING IMPORT TO NEW APPROVED SUBGRADE 2x COMPACTORS WORKING ~~AT~~ FILL TO STONEY CK

COMMENTS: IT WILL TAKE A DAY TO GET A LAYER IN THE NEW (E4) TESTING WILL COMMENCE TOMORROW WITH SUFFICIENT VOLUME OF MATERIEL

Signed: Date: 16.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

SUBGRADE APPROVAL REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/~~8~~ 1
Project:	Woorong Bulk Earthworks	Report No:	S 22
Location:	Marsden Park	Report Date:	17.04.18 / ~~/2017~~
Subgrade Inspection Report		Technician:	Heath Wilson

Subgrade areas assessed

Area ID	Date	Approximate extent	Subgrade Description	Geometry Summary	Survey Reference	Approved (Yes/No)
APPROVED SUBGRADE (S4)22	17.04.18	43756m² 10.812 ACRE	FLOOR LEVEL IS (6) CLAY MED PLAST, BROWN SILTY MATERIEL 10% GRAVELS	RECTANGLE FLAT AREA ALONG BOTTOM OF (S4) 16 BATTER		Y

COMMENTS:

Signed: Date: 17.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	280
Location:	Marsden Park	Report Date:	17 /04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 6.30

Time off site: 5.00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / NR 22	TEST NO'S / 5881-5897/17
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

IMPORT TRUCKS CARTING MATERIEL TO (S4)22 FIRST LIFT 2x COMPACTORS PUSHING MATERIEL OF THE EAST TO THE NORTH WATERCART SPRAYING ROADS AS THERE DIRTED AND ALONG SURFACE AREA TOWARDS STONEY CK ROAD

5. Instructions given on site

GRADER AND SCRAPER BOXING OUT ROADS 300mm BELOW SUBGRADE LEVEL FOR REPLACEMENT TO BE USED

COMMENTS:

Signed: Date: 17.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	281
Location:	Marsden Park	Report Date:	18 /04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 1700

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S / 5898-5908/11
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCK AND DOGS CONSINUE CARTING IMPORT MATERIEL TO (SL) 22 PARRAIEL TO STONEY CK ROAD
2x COMPACTORS PUSHING NORTH INTO FARMERS (BOY) OF PROPERTY DS ALSO PUSHING TOPSOIL OUT ALONG SUBGRADE FLOOR

5. Instructions given on site

GRADER ALSO TRIMMING BATTER INTO FILL AREA ALSO GRADER AND SCRAPER BOXING ROADS OUT IN SUBGRADE IZ READY FOR REPLACEMENT SUBGRADE
6x DENSITY TESTS CARRIED OUT ON FILL BOTH ENDS OF

COMMENTS: BRIDGE APPROX 2M PLACEMENT COMPACTED WITH 12 TON PAD FOOT AND LITE REMOTE CONTROL ONE FOR THE DOGES BUTED UP AGAINST CONCRETE, NORTH AND SOUTH ENDS

Signed:

Date: 18.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

CBR/19

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	282
Location:	Marsden Park	Report Date:	19/04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site:

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5909 - 5921/13
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

IMPORT TRUCKS CARING MATERIEL TO SUBGRADE 22 PARRAIELL TO STONEY CREEK ROAD COMPACTORS PUSHING WEST OF THE FACE ALONG WITH WATERCART ROLLING AND SPRAYING GRADER AND SCRAPER BOXING OUT ROADS IN (S4) 12 STOCKPILED STONE

5. Instructions given on site

WILL BE USED AS REPLACEMENT SUBGRADE
DOZER KEYING INTO (S4) 16 BATTER AS LAYERS COME UP IN (S4) 22 WHILST COMPACTOR PUSHES IT INTO KEY AND ROLLS ALONG WITH WATERCART BATTER SPRAYING

COMMENTS:

Signed: Date: 19.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

Our Ref: 8599/1-R16
25 May 2018

Daracon Contractors Pty Ltd
P O Box 6145
SILVERWATER BC NSW 1811
Email: SimpsonW@daracon.com.au

Attention: Mr S Wong

Dear Sir

Re: **Woorong Bulk Earthworks**
Marsden Park
Monthly Site Filling Certificate – May 2018

For the production period 20 April to 18 May 2018, inclusive, we submit our Geotech Monthly Report for the above project.

During the foregoing testing period, a total of eighty eight compaction control tests (tests 5922 to 6009, inclusive) were carried out and reported. The locations of the 88 tests are shown on the attached Drawing Nos 8599/1-100 and 8599/1-101. All tests have been undertaken in accordance with the Test Methods and Specifications shown on the attached certificates. Scanned daily records and subgrade reports are also attached.

Based on the fill quantities/survey data, the frequency of field density and compaction tests was in accordance with Level 1 as defined in AS3798 “Guidelines on Earthworks for Commercial & Residential Development”. We certify that all tested locations attained the density ratio shown on the test results sheets. Where failures were encountered, the areas were re-worked and re-tested to achieve the specified density ratio.

Based on site observations and testing, it is considered that the fill placed to date at the locations shown on the attached drawings is classified as "Controlled" fill and that the specified compaction level has been achieved within the tested area.

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully
GEOTECH TESTING PTY LTD

Adrian Kench
Laboratory Manager

Attached Density Test Results Certificates Tests 5922 to 6009
Test Location Drawings 8599/1-100 and 8599/1-101
Daily Records

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5922	5923	5924	5925	5926	5927	5928	5929
DATE TESTED			20/04/2018							
RESULTS										
Hilf Density Ratio	Standard	%	96.5	99	99	96	96	98	99	97
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**-0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294805.801	294753.835	294766.605	294803.542	294799.701	294759.739	294779.559	294814.934
Northing			6268721.335	6268717.446	6268735.969	6268739.312	6268770.544	6268782.024	6268801.852	6268808.912
Reduced Level		m	17.234	17.25	17.155	17.136	17.108	16.938	16.696	16.592
Shown on Drawing No			8599/1-101							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.10	2.09	2.07	2.06	2.08	2.10	2.06
Field Moisture Content		%	15.5	16.0	17.5	19.5	16.5	18.5	18.0	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5922	5923	5924	5925	5926	5927	5928	5929
Peak Converted Wet Density		t/m³	2.15	2.12	2.11	2.16	2.15	2.12	2.12	2.12
Apparent Optimum Moisture Content		%	15.5	15.5	18.0	19.5	16.5	18.0	18.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2-3	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5930	5931	5932	5933	5934	5935	5936	5937
DATE TESTED			20/04/2018		23/04/2018					
RESULTS										
Hilf Density Ratio	Standard	%	99.5	97	97	96.5	97	97.5	99	98
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294776.829	294769.306	294808.465	294815.881	294772.985	294813.923	294845.399	294805.345
Northing			6268841.308	6268866.81	6268871.259	6268901.408	6268920.261	6268933.056	6268947.873	6268964.69
Reduced Level		m	16.407	16.258	16.137	15.955	16.023	15.802	15.529	15.742
Shown on Drawing No			8599/1-101	8599/1-100						
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.08	2.07	2.06	2.09	2.08	2.10	2.10
Field Moisture Content		%	17.5	16.0	16.5	17.5	17.0	17.5	16.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5930	5931	5932	5933	5934	5935	5936	5937
Peak Converted Wet Density		t/m³	2.12	2.14	2.13	2.13	2.15	2.13	2.12	2.14
Apparent Optimum Moisture Content		%	17.0	16.0	16.0	17.5	17.0	17.0	16.5	18.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5938	5939	5940	5941	5942	5943	5944	5945
DATE TESTED			23/04/2018		01/05/2018				
RESULTS										
Hilf Density Ratio	Standard	%	97	98.5	98	96.5	96.5	97	98	98.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.5**	**0.5**	**0.0**	**0.5**	**0.0**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294804.835	294840.611	294793.245	294785.794	294790.08	294781.512	294791.715	294786.608
Northing			6268994.432	6268988.229	6268919.083	6268682.024	6268705.067	6268730.697	6268758.727	6268789.418
Reduced Level		m	15.69	15.592	16.407	18.469	18.294	18.03	17.745	17.555
Shown on Drawing No				8599/1-100				8599/1-101		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.08	2.09	2.07	2.06	2.07	2.09	2.08
Field Moisture Content		%	16.5	18.5	16.0	16.5	18.0	16.5	17.5	17.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5938	5939	5940	5941	5942	5943	5944	5945
Peak Converted Wet Density		t/m³	2.14	2.11	2.13	2.14	2.13	2.13	2.13	2.11
Apparent Optimum Moisture Content		%	16.5	18.5	16.0	16.0	17.5	16.5	17.0	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5946	5947	5948	5949	5950	5951	5952	5953
DATE TESTED			01/05/2018			02/05/2018				
RESULTS										
Hilf Density Ratio	Standard	%	97	97.5	98	98	97	96	97.5	96
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.5**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294793.921	294785.431	294791.902	294774.417	294771.292	294767.345	294763.74	294758.19
Northing			6268817.018	6268848.819	6268892.69	6268932.7	6268900.845	6268852.381	6268807.568	6268772.448
Reduced Level		m	17.177	16.96	16.686	16.53	16.672	16.909	17.265	17.462
Shown on Drawing No			8599/1-101	8599/1-100					8599/1-101	
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.11	2.09	2.08	2.07	2.06	2.05
Field Moisture Content		%	15.5	16.0	15.5	16.0	17.5	15.5	17.0	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5946	5947	5948	5949	5950	5951	5952	5953
Peak Converted Wet Density		t/m³	2.13	2.11	2.15	2.13	2.14	2.16	2.11	2.14
Apparent Optimum Moisture Content		%	15.5	16.0	15.0	16.0	17.5	15.0	16.5	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5954	5955	5956	5957	5958	5959	5960	5961
DATE TESTED			02/05/2018		04/05/2018					
RESULTS										
Hilf Density Ratio	Standard	%	96.5	97.5	97.5	97	97.5	96.5	99	96.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-0.5**	**0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294753.413	294753.285	294856.725	294825.547	294784.509	294789.188	294819.858	294858.038
Northing			6268740.384	6268706.659	6268944.99	6268950.158	6268958.37	6268977.027	6268977.5	6268973.152
Reduced Level		m	17.82	17.905	16.108	16.386	16.493	16.346	16.353	16.217
Shown on Drawing No			8599/1-101		8599/1-100					
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.10	2.08	2.09	2.09	2.07	2.11	2.06
Field Moisture Content		%	16.0	16.0	16.5	16.5	17.0	16.0	16.5	17.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5954	5955	5956	5957	5958	5959	5960	5961
Peak Converted Wet Density		t/m³	2.14	2.15	2.13	2.15	2.14	2.15	2.13	2.13
Apparent Optimum Moisture Content		%	16.0	16.0	16.5	16.5	16.5	16.0	17.0	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5962	5963	5964	5965	5966	5967	5968	5969
DATE TESTED			04/05/2018					08/05/2018		
RESULTS										
Hilf Density Ratio	Standard	%	96.5	96	98	97.5	97.5	99	97	96.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294858.192	294825.33	294789.892	294805.024	294855.612	294773.869	294813.271	294808.613
Northing			6268996.36	6269003.06	6269009.885	6269028.922	6269020.389	6268689.026	6268686.995	6268710.331
Reduced Level		m	16.156	16.323	16.168	16.131	16.053	19.074	18.854	18.766
Shown on Drawing No			8599/1-100					8599/1-101		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.06	2.10	2.09	2.08	2.11	2.09	2.06
Field Moisture Content		%	16.0	16.5	15.5	16.0	17.5	18.5	18.0	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5962	5963	5964	5965	5966	5967	5968	5969
Peak Converted Wet Density		t/m³	2.14	2.15	2.14	2.14	2.13	2.13	2.15	2.14
Apparent Optimum Moisture Content		%	15.5	16.5	15.0	16.0	17.0	18.5	17.5	18.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5970	5971	5972	5973	5974	5975	5976	5977
DATE TESTED			08/05/2018							
RESULTS										
Hilf Density Ratio	Standard	%	97	96.5	97.5	97	99	96	97.5	98
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.5**	**0.5**	**0.5**	**0.0**	**0.5**	**0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294764.441	294778.371	294822.991	294816.94	294764.159	294775.913	294820.683	294823.295
Northing			6268714.739	6268733.313	6268732.904	6268761.343	6268769.151	6268791.57	6268788.965	6268810.596
Reduced Level		m	18.589	18.405	18.367	18.273	18.351	17.967	18.14	17.921
Shown on Drawing No			8599/1-101							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.07	2.07	2.09	2.08	2.08	2.07	2.07	2.09
Field Moisture Content		%	18.5	18.0	18.0	17.5	18.0	17.5	18.5	18.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5970	5971	5972	5973	5974	5975	5976	5977
Peak Converted Wet Density		t/m³	2.13	2.14	2.14	2.14	2.10	2.16	2.12	2.13
Apparent Optimum Moisture Content		%	18.0	17.5	17.5	17.0	18.5	17.0	18.5	19.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5978	5979	5980	5981	5982	5983	5984	5985
DATE TESTED			08/05/2018	10/05/2018						
RESULTS										
Hilf Density Ratio	Standard	%	98	96.5	97	97.5	96.5	96	98	99.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.0**	**-0.5**	**0.5**	**0.5**	**0.0**	**0.0**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294781.259	294769.743	294810.889	294824.683	294783.037	294793.236	294839.252	294823.519
Northing			6268818.842	6268834.481	6268830.154	6268851.149	6268860.767	6268875.525	6268872.948	6268903.126
Reduced Level		m	17.751	17.698	17.733	17.501	17.542	17.327	17.202	17.245
Shown on Drawing No				8599/1-101				8599/1-100		
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.06	2.10	2.09	2.07	2.05	2.09	2.08
Field Moisture Content		%	18.0	16.5	16.0	18.5	17.5	16.5	18.5	18.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5978	5979	5980	5981	5982	5983	5984	5985
Peak Converted Wet Density		t/m³	2.14	2.14	2.17	2.14	2.14	2.14	2.13	2.09
Apparent Optimum Moisture Content		%	17.5	16.5	16.5	18.0	17.0	16.5	18.0	18.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5986	5987	5988	5989	5990	5991	5992	5993
DATE TESTED			10/05/2018			15/05/2018			
RESULTS										
Hilf Density Ratio	Standard	%	97	97	97.5	98	98	97.5	96.5	99
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**0.5**	**0.0**	**0.5**	**0.5**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294786.959	294786.299	294837.697	294817.456	294781.722	294773.582	294813.838	294811.973
Northing			6268910.021	6268937.52	6268934.219	6268687.296	6268702.97	6268721.293	6268722.476	6268745.681
Reduced Level		m	17.243	17.172	16.855	19.396	19.396	19.143	18.941	18.935
Shown on Drawing No			8599/1-100			8599/1-101				
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.08	2.10	2.10	2.09	2.07	2.07	2.11
Field Moisture Content		%	18.5	17.5	17.5	17.5	18.5	18.0	18.0	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5986	5987	5988	5989	5990	5991	5992	5993
Peak Converted Wet Density		t/m³	2.14	2.14	2.15	2.14	2.13	2.12	2.14	2.13
Apparent Optimum Moisture Content		%	18.5	17.0	17.5	17.0	18.0	18.0	17.5	16.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			5994	5995	5996	5997	5998	5999	6000	6001
DATE TESTED			15/05/2018							17/05/2018
RESULTS										
Hilf Density Ratio	Standard	%	97	97.5	97.5	100.5	98	97.5	98	96.5
Moisture Variation from OMC (-Drier/+Wetter)		%	**0.0**	**-0.5**	**0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294769.777	294774.139	294818.632	294829.052	294790.619	294778.376	294823.566	294870.699
Northing			6268753.69	6268778.653	6268780.331	6268810.489	6268819.603	6268838.132	6268848.107	6269021.118
Reduced Level		m	18.885	18.623	18.823	18.53	18.329	18.181	18.185	17.737
Shown on Drawing No			8599/1-101							8599/1-100
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.11	2.09	2.12	2.08	2.07	2.09	2.07
Field Moisture Content		%	18.0	18.5	18.5	14.5	14.5	14.0	14.5	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			5994	5995	5996	5997	5998	5999	6000	6001
Peak Converted Wet Density		t/m³	2.14	2.16	2.14	2.11	2.12	2.12	2.13	2.14
Apparent Optimum Moisture Content		%	18.0	19.0	18.0	15.0	15.5	14.5	15.0	17.5
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/1
Date: 23/05/2018

PROJECT: SITE FILL TESTING - AREA B
RESIDENTIAL DEVELOPMENT.WOORONG PARK, MARSDEN PARK

TEST NUMBER			6002	6003	6004	6005	6006	6007	6008	6009
DATE TESTED			17/05/2018							
RESULTS										
Hilf Density Ratio	Standard	%	97	97.5	97	97.5	96.5	95	96.5	96
Moisture Variation from OMC (-Drier/+Wetter)		%	**-0.5**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**-0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Easting			294826.63	294801.419	294831.81	294850.606	294791.672	294829.29	294845.541	294799.049
Northing			6269030.547	6269020.273	6269002.191	6268976.67	6268968.93	6268945.117	6268918.546	6268916.781
Reduced Level		m	17.744	17.548	17.684	17.62	18.186	17.772	17.912	18.181
Shown on Drawing No			8599/1-100							
Retested by Test			-	-	-	-	-	-	-	-
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.08	2.10	2.09	2.11	2.09	2.07	2.08	2.07
Field Moisture Content		%	15.0	15.5	16.0	15.0	17.5	15.5	15.0	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			6002	6003	6004	6005	6006	6007	6008	6009
Peak Converted Wet Density		t/m³	2.14	2.15	2.16	2.16	2.17	2.18	2.16	2.16
Apparent Optimum Moisture Content		%	15.0	15.5	16.0	15.0	18.0	16.0	15.5	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020c Version 01 06/17 - issued by ER

NATA
Accreditation Number 2734
Corporate Site Number 2727

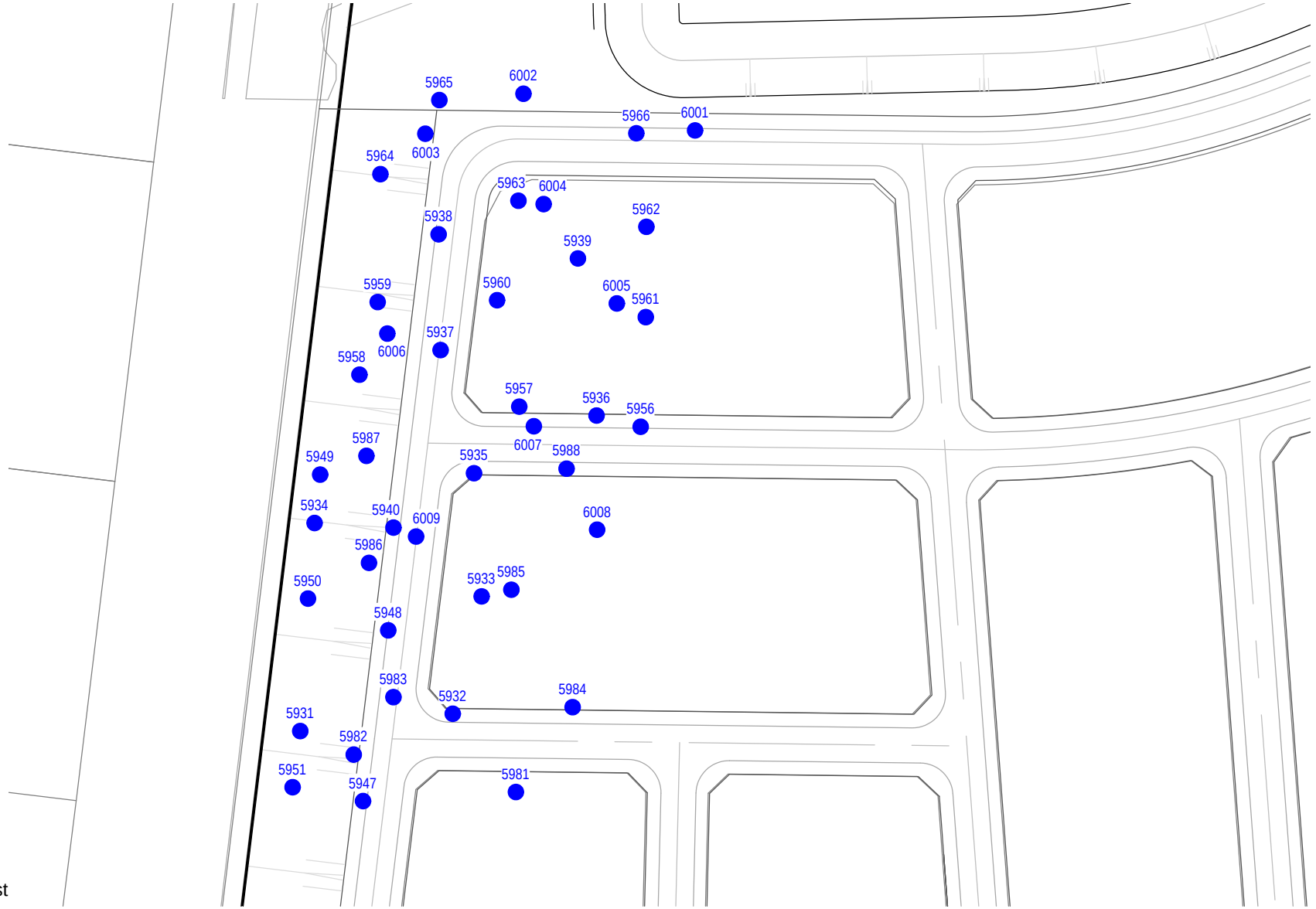
Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench 23/05/2018
Approved Signatory

Head Office:
34 Borec Road, Penrith NSW 2750
P O Box 880 Penrith NSW 2751
Telephone: (02) 4722 2

Prestons Laboratory:
Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111 Facsimile: (02) 9607 6200

email: info@geotech.com.au www.geotech.com.au



LEGEND

● Density Test

GEOTECH TESTING PTY LTD®

34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321

Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-100
Job No: 8599/1
Drawn By: MH
Date: 22 May 2018
Checked By: AK

File No: 8599-1
Layers: 0, Lay100

LEGEND

● Density Test

GEOTECH TESTING PTY LTD®

34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321

Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park - Area B
Marsden Park

Location of Field Density Tests

Drawing No: 8599/1-101
Job No: 8599/1
Drawn By: MH
Date: 22 May 2018
Checked By: AK

File No: 8599-1
Layers: 0, Lay101

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	283
Location:	Marsden Park	Report Date:	20/04/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 6.30

Time off site: 5.00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5922 - 5938/10
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

5. Instructions given on site

TRUCKS CARTING IMPORT MATERIEL TO APPROVED SUBGRADE 22 STONEY CREEK ROAD BOTH
2x COMPACTORS PUSHING WEST TO CREATE THE SAME LEVEL SURFACE ALL THE WAY ACROSS

COMMENTS: GRADER TRIMMING HAUL ROADS FROM RICHMOND ROAD TO FILL AREA GRADER ALSO TRIMMING SANDSTONE IN PRECINCT 4 READY FOR BASE LAYER

Signed:

Date: 20.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	284
Location:	Marsden Park	Report Date:	23 / 04 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5932 - 5939 / 8
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

GRADER SPREADING DUMPED ROADBASE IN PREC 4 FOR BASE LAYERS THROUGHT ALL FSL LEVELS
TRUCKS CARTING IMPORT MATERIEL TO APPROVED SUBGRADE 22
2X COMPACTORS WORKING OF THE FACE TOWARDS THE EAST

5. Instructions given on site

DB HELPING WITH THE LARGE AMOUNTS OF FILL TO BE PUSHED WHILE TRUCKS KEEP CARTING
PAD FOOT ROLLER CONTINUES TO COMPACT TIGHT AREAS THAT SQUARE UP TO BATTERS

COMMENTS:

Signed:

Date: 23.04.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	285
Location:	Marsden Park	Report Date:	01 / 05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 500

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5940 - 5948/9
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

2x 627 SCRAPERS TOPSOILING SUBGRADE 12 WITH PREVIOUSLY STOCKPILED MATERIEL GRADER PUSHING AND TRIMMING TO APPROX 150MM AT A LATER STAGE THE SEEDING TRACKTOR WILL SPREAD GRASSING SEADS AND WATERCART WILL BATTER SIDE SPRAY FROM HILL ROADS

5. Instructions given on site

TRUCKS CARING IMPORT MATERIEL TO (S4)22 PARALLEL TO STONEY CK ROAD
2x COMPACTORS PUSHING WEST WALLS D8 KEYS INTO BATTER 16 CUTING NORTH FOR NEXT LIFT
GRADER ALSO TRIMMING FINISHED AREAS FOR COMPLETION

COMMENTS:

Signed: Date: 01.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	286
Location:	Marsden Park	Report Date:	02/05/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5949 ~~5999~~ - 5958/67
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARTING IMPORT MATERIEL TO APPROVED SUBGRADE 22 ALONG NORTH END PARALLEL TO STONEY CREEK ROAD
2x COMPACTORS PUSHING OF THE TOP FACE FOR FINAL LIFT WHILST DOZER FINISHED KEYING (54)16 BATTER

5. Instructions given on site

2x SCRAPERS ARE STILL TOPSOILING (54) 12 WHILST GRADER TRIMS TO LEVEL
HALL ROADS ARE BEING BOXED OUT AND REPAIRED WITH SANDSTONE FOR 2ND LAYER (54) ALSO

COMMENTS: WATERCART SPRAYING ROADS AS DUMPED INTO FILL AREA

Signed:

Date: 02.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	287
Location:	Marsden Park	Report Date:	03/05/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARRY IMPORT MATERIEL TO SUBGRADE 22 PLACING IMPORT ON THE TOP AND PUSHING NORTH OF THE EAST WITH 2X COMPACTORS ALSO DOZER LEVELING WHILST KEYING INTO BATTER FOR FURTHER LIFT AS REQUIRD

5. Instructions given on site

2X SCRAPERS PLACING TOPSOIL OVER (SG) 12 WITH PREVIOUSLY STOCKPILED MATERIEL GRADER TRIMMING TO FSL FILE SO GRASS SEEDING TRACTOR CAN DO HIS JOB
CULVERT BITMEANS HAS MORE FILL PLACED WHEEL 12t PAD FOOT

COMMENTS: ROLLS AND REMOTE 21 TO COMPACT UP AGAINST CONCRETE FORM
ROAD BASE PLACED ON ROAD C102 WITH MOISTURE ADJUSTMENT FOR TRIAL FROM QUARRY

Signed:

Date: 03.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	288
Location:	Marsden Park	Report Date:	04 / 05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5956-5966/11
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

ROAD TRUCKS CARRY IMPORT MATERIEL TO APPROVED SUBGRADE 22 RUNNING PARALLEL TO STONEY CK ROAD
2x COMPACTORS PUSHING PLACED OF THE FACE TO THE NORTH
D8 DOZER ALSO PUSHING MATERIEL WHILST WATERCART SPRAYS

5. Instructions given on site

GRADER TRIMMING REPLACEMENT SUBGRADE IN (56) 12 EXCAVATOR LOADING OUT TRUCK AND PLACING IN APPROVED AREAS
PAD FOOT ROLLER COMPACTING ALONG WITH WATERCART TYRE ROLLING AFTER SANDSTONE WET UP

COMMENTS:

Signed:

Date: 04.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	299
Location:	Marsden Park	Report Date:	07/05/2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARTING IMPORT MATERIEL TO SUBGRADE TO MATERIEL PLACED ON TOP AND PUSHED OF THE FALE PUSHING WEST TOWARDS STONEY CREEK ROAD
WATERCARTS ALSO SPRAYING PLACED MATERIEL AND TYRE ROLLING

5. Instructions given on site

EXCAVATOR LOADING DUMPTRUCK AND PLACING STOCKPILED SANDSTONE IN BOXED OUT ROAD SUBGRADE TO
UNDER PUSHING IN SUBGRADE REPLACEMENT LAYER PAD FOOT ROLLER COMPACTING AS WATERCART SPRAYS

COMMENTS:

Signed: Date: 07.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	~~288~~ 290
Location:	Marsden Park	Report Date:	08 / 05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5967 - 5977 / 1
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5974 - 5978 / 5

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

BEHIND IT OR NOT TRUCKS CARTING IMPORT MATERIEL TO FILL AREA SUBGRADE 22 2x COMPACTORS PUSHING NORTH PARALLEL TO STONEY CREEK ROAD 08 FORMING BATTER INTO LOW WATER RUNOFF AREA WATERCART ALSO SPRAYING AND TYRE ROLLING

5. Instructions given on site

SHALE IMPORT IS BEYOND A USABLE SIZE SOME PIECES APPROX SIZE OF COMPACTOR WHEEL
MATERIEL IS BEIN REMOVED FROM WORK AND WILL BE TAKEN OFF SITE AS AREA IS WITHIN 1M FSL

COMMENTS: SANDSTONE IS CONTINUING IN (5) 12 AS SUBGRADE REPLACEMENT DUMP TRUCK SPREADING WHILST GRADER SPREADS AND PAD FOOT BINDS FOR FSL

Signed:

Date: 08.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	~~289~~ 291
Location:	Marsden Park	Report Date:	09 / 05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCK AND DOGS CARTING IMPORT MATERIEL TO APPROVED SUBGRADE 22 WHERE 2x COMPACTORS PUSHING NORTH INTO A DESIGNED DAM 08 HAS FORMED WITH THE IMPORT AND COMPACTORS HAVE TIGHTENED UP FOR SEALMENT

5. Instructions given on site

WATERCART SPRAYING PLACED ROADS WITH SHALE AND TYRE ROLLING UP AGAINST BATTER THAT DOZER HAS KEYED OUT FOR NEAR FINAL LIFT
GRADER TRIMMING HALL ROADS IN (S4) 12 ALSO REPLACEMENT

COMMENTS: SUBGRADE
FSL LOTS WITH TOPSOIL ARE ALSO HAVING TOPS TRIMED FOR GRASS TRACTOR TO SEED AT A LATER STAGE

Signed: Date: 09.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/~~3~~ 1
Project:	Woorong Bulk Earthworks	Report No:	~~290~~ 292
Location:	Marsden Park, Precinct 2	Report Date:	10 / 05 /~~2017~~ 2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 500

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 22	TEST NO'S 5979-5988/10

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

BASE COARSE WORKED INTO ROAD CIOZ MATERIEL FROM CONCRETE RECYCLERS
GRADER TRIMING TO FINISHED LEVEL TYRED ROLLER ROLLING UP AFTER WATERCART SLURRYS FOR THE FINISHED PRODUCT

5. Instructions given on site

3x DCP'S CARRD OUT IN PROPOSED RETAINING WALL FOOTING RAA 150 300mm FOOTING WILL BE POURED WITH BLOCK WALL ON SURFACE
TRUCK AND DOGS CARING IMPORT FILL MATERIEL TO (SG) 22
2x COMPACTORS PUSHING NORTH AGAINST STONEY CK ROAD

COMMENTS: DOZER FORMING TOP LEVEL SAUSAGE ALONG STONEY CK ROAD SLIDE TOP OF FILL AREA TO MARRY FINAL LAYER INTO

Signed: Date: 10.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/~~2~~ 1
Project:	Woorong Bulk Earthworks	Report No:	~~277~~ 293
Location:	Marsden Park, Precinct 2	Report Date:	14 /05 /~~2017~~ 2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5100

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE 22	TEST NO'S 5989 -

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARTING IMPORT FILL MATERIEL TO APPROVED SUBGRADE 22 WHERE 2x EXCAVATORS PUSHING MATERIEL WEST ALONG STONEY CREEK ROAD ONTO FACE
OB PUSHING OVER FACE WHILST WATERCART SPRAYS AND TYRE ROLLS

5. Instructions given on site

ROAD BASE DIRED ON ROAD C102 GRADER TRIMMING TO LEVEL MULTI TYRED ROLLER ON ROAD WATERCART SLURYD IT UP FOR BASE LAYER APPROX 80% OF ROAD COMPLETE

COMMENTS:

Signed: Date: 14.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	294
Location:	Marsden Park	Report Date:	15 /05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 5989-6000/12
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

2x COMPACTORS PUSHING IMPORT MATERIEL FROM TRUCKS CARING FROM AROUND SYDNEY SITES
PLACEMENT OF FILL IS PLACED ON THE TOP OF FACE AND PUSHED OF FORWARDS THE WEST TO STONEY CREEK ROAD

5. Instructions given on site

OS PUSHING IN BATTER WHILST WATERCART WETS MATERIEL AND TYRE ROLLS IN TO CREATE A SEALED LAYER
ROADBASE BEING PLACED IN ROAD C102 GRADER TRIMMING TO LEVEL AND SMOOTH DRUM ROLLS UP AFTER WATER HAS BEEN SPRAYED

COMMENTS:

Signed: Date: 15.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	293
Location:	Marsden Park	Report Date:	16 / 05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARTING IMPORT MATERIEL TO APPROVED SUBGRADE 22 RUNNING ALONG SIDE STONEY CREEK ROAD
2x DOZERS PUSHING MATERIEL OF THE FACE ALONG WITH 825 COMPACTOR ALSO PAD FOOT ROLLER ROLLING BATTERS OF FACE

5. Instructions given on site

GRADER TRIMMING PADDOCKS IN PRECINCT 3 SO TOPSOIL IS READY FOR THE SEEDING TRACTOR
(CBR) SAMPLES CARRIED OUT IN PRECINCT 4 12 ALL UP FOR PAVEMENT DESIGN AS PROPOSED INSTEAD OF THE SUBGRADE REPLACEMENT

COMMENTS:

Signed: Date: 16.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System Quality ISO 9001 SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	296
Location:	Marsden Park	Report Date:	17 /05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5:00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE / 22	TEST NO'S / 6001 - 6009 / 9
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

TRUCKS CARTING IMPORT FILL MATERIEL TO SUBGRADE (22) RUNNING PARRALLEL TO STONEY CREEK ROAD
FSL LAYER IS APPROX 30% COMPLETE PUSHING MATERIEL WEST OF THE FSL & MARRYING INTO SUBGRADE BATTER (16)

5. Instructions given on site

GRADER TRIMMING FSL IN SUBGRADE 22 LOWER AREA TOWARDS FARM HOUSE WHERE DAM CREATED
TRUCKS WILL CONTINUE TO CART IMPORT UNTIL LEVEL TO MINIMIZE WATER RUNOFF

COMMENTS: TRUCKS CARTING NOW TO SUBGRADE 12 TO FILL LOW AREA AND GIVE COMPACTOR AND DOZER TO FINISH UP STONEY CK SIDE

Signed:

Date: 17.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

Certified System
Quality
ISO 9001
SAI GLOBAL

GEOTECHNICAL INSPECTION AND TESTING AUTHORITY

Accreditation No 2734 Corporate Site No 2727

LEVEL 1 DAILY REPORT

Client:	Daracon Contractors Pty Ltd	Project No:	8599/1
Project:	Woorong Bulk Earthworks	Report No:	~~295~~ 297
Location:	Marsden Park	Report Date:	18 / 05 /2018
Test Methods:	AS 1289 5.1.1, 5.8.1	Technician:	Heath Wilson

Time on site: 0630

Time off site: 5.00

1. Subgrade Approval

Areas ID	Subgrade Approval Report No:	Comments
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /
APPROVED SUBGRADE	SUBGRADE /	TEST NO'S /

2. Lot Approval

Lot ID	Lot Approval Report No:	Comments

3. Survey

Type of Survey	Survey undertaken by:	Reference
Test Locations	Geotech /	
Lot Boundaries	Geotech /	

4. Instructions received on site

D8 PUSHING TOPOS OVER IN BAY 12 TO LIFT FINAL AREA TO LEVEL
WATERCART SPRAYING WHILST TYRE ROLLING
THE LAST DAY FOR BULK EARTHWORKS PAVEMENT TESTING WILL CONTINUE IN PRECINCT 4

5. Instructions given on site

COMMENTS:

Signed: Date: 18.05.18

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			1	2	3	4	5	6	7	8
DATE TESTED & SAMPLED			03/05/2022				04/05/2022			
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**96**	**97**	**96.5**	**97**	**100.5**	**98.5**	**100.5**	**99.5**
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/84-1							
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	17.7	17.84	17.91	18.14	18.22	18.29	18.78	18.68
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.18	2.17	2.10	2.12	2.11	2.10	2.12	2.11
Field Moisture Content		%	11.0	12.5	17.0	17.0	19.0	18.0	18.5	17.5
Material retained on	19mm Sieve (wet)	%	18	16	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			1	2	3	4	5	6	7	8
Lab Compaction Date Tested			12/05/2022	12/05/2022	12/05/2022	12/05/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Peak Converted Wet Density		t/m³	2.27	2.24	2.18	2.19	2.10	2.13	2.11	2.12
Apparent Optimum Moisture Content		%	11.0	13.0	17.5	17.5	19.0	18.0	18.5	17.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			1	1	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
A Kench 26/07/2022

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			9	10	11	12			
DATE TESTED & SAMPLED			10/06/2022						
RESULTS									
Hilf Density Ratio	**Standard**	**%**	**102**	**102**	**101.5**	**101.5**			
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**0.0**	**0.0**	**0.0**	**0.0**			
Specification	**Density Ratio (Standard)**	**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION									
Chainage	(Carriageway L/R)	m	-	-	-	-			
Shown on Drawing No			8599/84-1						
Retested by Test			-	-	-	-			
Layer Thickness		mm	150	150	150	150			
Reduced Level		m	18.90	18.96	19.02	19.16			
FIELD & LABORATORY DATA									
Field Wet Density		t/m³	2.14	2.12	2.13	2.12			
Field Moisture Content		%	15.5	14.5	16.0	15.5			
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5			
Lab Compaction result from test number			9	10	11	12			
Lab Compaction Date Tested			27/06/2022	27/06/2022	27/06/2022	27/06/2022			
Peak Converted Wet Density		t/m³	2.10	2.08	2.10	2.09			
Apparent Optimum Moisture Content		%	15.0	15.0	16.0	15.5			
Number of Compaction Points			3	3	3	3			
Test Procedures - See Note Number			12	12	12	12			
Material Description - see below			2	2	2	2			

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date 26/07/2022

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

N

LEGEND

● Density Test

GEOTECH TESTING PTY LTD ®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park
Newpark Precinct 7 Stage 7F

Location of Field Density Tests

Drawing No: 8599/84-1
Job No: 8599/84
Drawn By: MH
Date: 27 July 2022
Checked By: BN

File No: 8599-84
Layers: 0, Lay1

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			13	14	15	16			
DATE TESTED & SAMPLED			09/11/2022						
RESULTS									
Hilf Density Ratio	**Standard**	%	**98**	**98**	**98.5**	**98**			
Moisture Variation from OMC	**(-Drier/+Wetter)**	%	**0.0**	**0.0**	**0.0**	**0.0**			
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**					**±2%**
TEST LOCATION									
Chainage	(Carriageway L/R)	m	-	-	-	-			
Shown on Drawing No			8599/84-2						
Retested by Test			-	-	-	-			
Layer Thickness		mm	150	150	150	150			
Reduced Level		m	22.51	22.72	22.48	21.95			
FIELD & LABORATORY DATA									
Field Wet Density		t/m³	2.08	2.09	2.11	2.12			
Field Moisture Content		%	17.5	18.0	18.0	17.0			
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5			
Lab Compaction result from test number			13	14	15	16			
Lab Compaction Date Tested			14/11/2022	14/11/2022	14/11/2022	14/11/2022			
Peak Converted Wet Density		t/m³	2.12	2.13	2.14	2.16			
Apparent Optimum Moisture Content		%	17.5	18.0	18.0	17.0			
Number of Compaction Points			3	3	3	3			
Test Procedures - See Note Number			12	12	12	12			
Material Description - see below			2	2	2	2			

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
A Kench 30/11/2022

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

N

LEGEND

● Density Test

GEOTECH TESTING PTY LTD ®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park
Newpark Precinct 7 Stage 7F

Location of Field Density Tests

Drawing No: 8599/84-2
Job No: 8599/84
Drawn By: MH
Date: 24 November 2022
Checked By: BN

File No: 8599-84
Layers: 0, Lay2

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			17	18	19	20	21	22	23	24
DATE TESTED & SAMPLED			27/11/2022				28/11/2022			
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**98.5**	**98**	**97.5**	**99**	**98.5**	**98**	**98.5**	**98.5**
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/84-3							
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	21.55	21.22	20.52	20.56	19.40	19.06	19.70	19.77
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.12	2.13	2.13	2.12	2.12	2.14	2.12	2.16
Field Moisture Content		%	17.5	17.5	15.5	17.0	16.0	17.0	16.0	16.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			17	18	19	20	21	22	23	24
Lab Compaction Date Tested			03/12/2022	03/12/2022	03/12/2022	03/12/2022	03/12/2022	03/12/2022	03/12/2022	03/12/2022
Peak Converted Wet Density		t/m³	2.15	2.17	2.18	2.14	2.15	2.17	2.15	2.19
Apparent Optimum Moisture Content		%	17.5	17.0	15.5	17.0	16.0	16.5	16.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Form No R 020 Version 12 05/22 - issued by ER

Report Date
A Kench 08/12/2022

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park
Newpark Precinct 7 Stage 7F

Location of Field Density Tests

Drawing No: 8599/84-3
Job No: 8599/84
Drawn By: MH
Date: 8 December 2022
Checked By: BN

File No: 8599-84
Layers: 0, Lay3

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			25	26	27	28	29	30	31	32
DATE TESTED & SAMPLED			01/12/2022			14/03/2023			15/03/2023	
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**105.5**	**102**	**101.5**	**101.5**	**105**	**99.5**	**104.5**	**97.5**
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**-2.0**	**-1.0**	**-0.5**	**-0.5**	**-2.0**	**-0.5**	**-1.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/84-4							
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	21.49	21.00	20.59	19.39	19.15	19.10	18.70	18.80
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.06	2.07	2.11	2.11	2.14	2.13	2.12
Field Moisture Content		%	15.5	14.0	14.5	16.5	19.5	16.5	18.5	14.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			25	26	27	28	29	30	31	32
Lab Compaction Date Tested			13/12/2022	13/12/2022	13/12/2022	20/03/2023	20/03/2023	20/03/2023	21/03/2023	20/03/2023
Peak Converted Wet Density		t/m³	1.99	2.02	2.04	2.08	2.01	2.15	2.04	2.17
Apparent Optimum Moisture Content		%	17.5	15.5	15.0	17.0	21.5	17.0	19.5	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2-3	2	2-3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
05/05/2023

A Kench

Approved Signatory

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			33	34	35	36	37	38	39	40
DATE TESTED & SAMPLED			15/03/2023		16/03/2023				17/03/2023	
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**104.5**	**101**	**103.5**	**101.5**	**106.5**	**104.5**	**101**	**105**
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**-0.5**	**-2.0**	**-1.5**	**-1.0**	**0.0**	**-2.0**	**-1.0**	**-1.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/84-4							
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	18.86	19.18	19.77	20.26	20.50	19.87	19.62	18.81
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.12	2.05	2.13	2.13	2.12	2.12	2.12	2.11
Field Moisture Content		%	14.0	16.0	17.5	15.0	16.0	12.5	15.5	16.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			33	34	35	36	37	38	39	40
Lab Compaction Date Tested			21/03/2023	21/03/2023	21/03/2023	21/03/2023	21/03/2023	21/03/2023	21/03/2023	21/03/2023
Peak Converted Wet Density		t/m³	2.03	2.03	2.06	2.10	1.99	2.03	2.10	2.01
Apparent Optimum Moisture Content		%	14.5	18.0	19.0	16.0	16.0	14.5	16.5	18.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
05/05/2023

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			41	42	43	44	45	46	47	48
DATE TESTED & SAMPLED			17/03/2023	21/03/2023			22/03/2023			24/03/2023
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**101.5**	**98**	**99.5**	**97.5**	**98**	**98**	**99**	**98**
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.5**	**-0.5**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/84-4				8599/84-5			
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	18.07	17.57	17.06	16.94	18.00	18.32	18.63	18.97
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.10	2.11	2.12	2.10	2.10	2.13	2.12	2.08
Field Moisture Content		%	16.5	16.0	15.5	14.5	17.5	15.5	15.5	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			41	42	43	44	45	46	47	48
Lab Compaction Date Tested			21/03/2023	31/03/2023	31/03/2023	31/03/2023	31/03/2023	31/03/2023	31/03/2023	28/03/2023
Peak Converted Wet Density		t/m³	2.07	2.15	2.13	2.15	2.14	2.17	2.14	2.12
Apparent Optimum Moisture Content		%	16.5	16.0	15.0	14.5	17.0	15.5	15.0	16.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
05/05/2023

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			49	50	51	52	53	54	55	56
DATE TESTED & SAMPLED			24/03/2023		07/04/2023			11/04/2023		
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**96**	**104**	**97.5**	**97.5**	**98**	**97.5**	**97**	**97.5**
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**-0.5**	**-0.5**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/84-5							
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	18.04	18.49	18.74	19.01	19.07	18.72	19.27	19.72
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.05	2.08	2.12	2.13	2.11	2.13	2.12	2.14
Field Moisture Content		%	15.0	16.5	18.0	17.0	18.5	18.0	19.5	15.0
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			49	50	51	52	53	54	55	56
Lab Compaction Date Tested			28/03/2023	28/03/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Peak Converted Wet Density		t/m³	2.13	2.00	2.17	2.18	2.15	2.18	2.18	2.19
Apparent Optimum Moisture Content		%	15.5	16.5	18.0	16.5	18.5	18.0	19.5	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2-3	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
05/05/2023

A Kench

Approved Signatory

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/84

PROJECT: SITE FILL TESTING
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7F

TEST NUMBER			57	58	59					
DATE TESTED & SAMPLED			14/04/2023							
RESULTS										
Hilf Density Ratio	**Standard**	**%**	**98**	**97**	**97**					
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**0.5**	**0.0**	**0.5**					
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-					
Shown on Drawing No			8599/84-5							
Retested by Test			-	-	-					
Layer Thickness		mm	150	150	150					
Reduced Level		m	18.64	19.54	19.42					
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.11	2.10	2.09					
Field Moisture Content		%	20.5	18.0	20.5					
Material retained on	19mm Sieve (wet)	%	<5	<5	<5					
Lab Compaction result from test number			57	58	59					
Lab Compaction Date Tested			20/04/2023	20/04/2023	20/04/2023					
Peak Converted Wet Density		t/m³	2.15	2.16	2.15					
Apparent Optimum Moisture Content		%	20.0	18.0	20.0					
Number of Compaction Points			3	3	3					
Test Procedures - See Note Number			12	12	12					
Material Description - see below			2-3	2	2-3					

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date
05/05/2023

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

LEGEND

● Density Test

GEOTECH TESTING PTY LTD®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

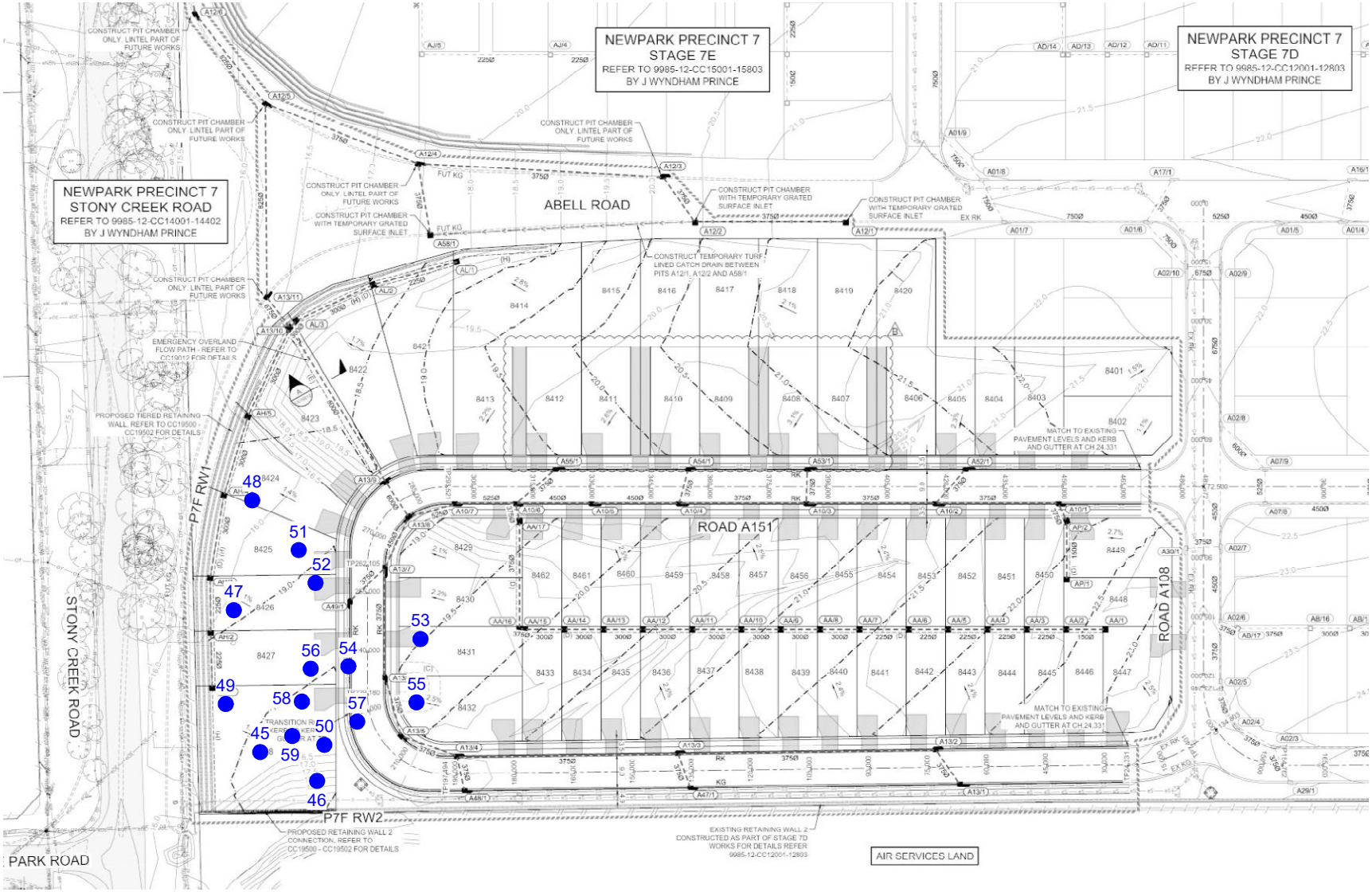
1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park
Newpark Precinct 7 Stage 7F

Location of Field Density Tests

Drawing No: 8599/84-4
Job No: 8599/84
Drawn By: MH
Date: 22 March 2023
Checked By: BN

File No: 8599-84
Layers: 0, Lay3



LEGEND

● Density Test

GEOTECH TESTING PTY LTD ®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
Fx: 02 4722 2777
www.geotech.com.au
e-mail:info@geotech.com.au

NOTES

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd
Residential Development
Woorong Park
Newpark Precinct 7 Stage 7F

Location of Field Density Tests

Drawing No: 8599/84-5
Job No: 8599/84
Drawn By: MH
Date: 27 April 2023
Checked By: BN

File No: 8599-84
Layers: 0, Lay5

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/115

PROJECT: RETAINING WALL BACKFILL TESTING
NEWPARK PRECINCT 7F, MARSDEN PARK

TEST NUMBER			1	2	3	4	5	6	7	8
DATE TESTED & SAMPLED			29/08/2023			31/08/2023			04/09/2023	
RESULTS										
Hilf Density Ratio	**Standard**	%	**97.5**	**97**	**98**	**96**	**97**	**97.5**	**100**	**99**
Moisture Variation from OMC	**(-Drier/+Wetter)**	%	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**						**±2%**
TEST LOCATION										
Chainage	(Carriageway L/R)	m	-	-	-	-	-	-	-	-
Shown on Drawing No			8599/115-1							
Retested by Test			-	-	-	-	-	-	-	-
Layer Thickness		mm	150	150	150	150	150	150	150	150
Reduced Level		m	18.09	18.45	18.01	19.04	17.24	19.11	18.17	17.30
FIELD & LABORATORY DATA										
Field Wet Density		t/m³	2.13	2.12	2.13	2.10	2.13	2.13	2.14	2.12
Field Moisture Content		%	15.0	15.0	14.5	14.0	15.0	13.5	15.0	15.5
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5	<5	<5	<5	<5
Lab Compaction result from test number			1	2	3	4	5	6	7	8
Lab Compaction Date Tested			11/09/2023	11/09/2023	11/09/2023	11/09/2023	11/09/2023	11/09/2023	11/09/2023	11/09/2023
Peak Converted Wet Density		t/m³	2.18	2.19	2.17	2.19	2.20	2.19	2.14	2.14
Apparent Optimum Moisture Content		%	15.0	14.5	14.0	13.5	14.5	13.5	14.5	15.0
Number of Compaction Points			3	3	3	3	3	3	3	3
Test Procedures - See Note Number			12	12	12	12	12	12	12	12
Material Description - see below			2	2	2	2	2	2	2	2

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date 21/09/2023

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

FIELD DENSITY RESULTS

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/115

PROJECT: RETAINING WALL BACKFILL TESTING
NEWPARK PRECINCT 7F, MARSDEN PARK

TEST NUMBER			9	10	11	12			
DATE TESTED & SAMPLED			04/09/2023	06/09/2023					
RESULTS									
Hilf Density Ratio	**Standard**	**%**	**98**	**99**	**97.5**	**99**			
Moisture Variation from OMC	**(-Drier/+Wetter)**	**%**	**0.0**	**0.5**	**0.0**	**0.0**			
Specification	**Density Ratio (Standard)**		**≥95%**	**Specification Moisture Variance from OMC**					**±2%**
TEST LOCATION									
Chainage	(Carriageway L/R)	m	-	-	-	-			
Shown on Drawing No			8599/115-1						
Retested by Test			-	-	-	-			
Layer Thickness		mm	150	150	150	150			
Reduced Level		m	18.24	17.36	19.26	18.39			
FIELD & LABORATORY DATA									
Field Wet Density		t/m³	2.12	2.13	2.11	2.12			
Field Moisture Content		%	16.0	14.0	15.5	14.0			
Material retained on	19mm Sieve (wet)	%	<5	<5	<5	<5			
Lab Compaction result from test number			9	10	11	12			
Lab Compaction Date Tested			11/09/2023	11/09/2023	11/09/2023	11/09/2023			
Peak Converted Wet Density		t/m³	2.16	2.15	2.16	2.14			
Apparent Optimum Moisture Content		%	16.0	14.0	15.5	14.0			
Number of Compaction Points			3	3	3	3			
Test Procedures - See Note Number			12	12	12	12			
Material Description - see below			2	2	2	2			

Notes

1: Assigned Values have been obtained from our Penrith laboratory – Accreditation No 2734
2: Assigned Values have been obtained from our Prestons laboratory – Accreditation No 14234
3. Results have been calculated using infinite decimal places. Therefore, calculated values may vary from those shown
4: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.1.1, 5.3.1, 5.4.1
5: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.3.1, 5.4.1
6: AS 1289 1.2.1 clause 6.4 (b),
7: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.2.1, 5.4.1, 5.8.1
8: AS 1289 1.2.1 clause 6.4 (b), 2.1.1., 5.5.1, 5.6.1, 5.8.1
9: Full details of Test Procedure 5.8.1 available on request
10: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.5.1, 5.6.1
11: AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.3.1, 5.7.1
12. AS 1289 1.2.1 clause 6.4 (b), 2.1.1, 5.7.1, 5.8.1
13: RMS T111, T119, T120, T166
14: RMS T111, T120, T166, T173
15: RMS T120, T119, T162
16. RMS T120, T162, T173
17. RMS T120, T164, T173

Material Description

1. CL-Clays of low plasticity, gravelly clays, sandy clays, silty clays
2. CI-Clay of medium plasticity, gravelly clays, sandy clays, silty clays
3. CH-Clays of high plasticity
4. SC-Clayey sands, sand-clay mixtures
5. SM-Silty sands, sand-silt mixtures
6. GC-Clayey gravels, gravel-sand-clay mixtures
7. SP-Sand, crushed dust, filling sand, washed sand
8. DGB20
9. DGB40
10. DGS20
11. DGS40
12. FCR20
13. FCR40
14. RC - Recycled Concrete
15. Recycled Roadbase
16. RSB - Recycled Sub-base
17. CSS - Crushed Sandstone
18. RSS - Ripped Sandstone
19. Cowels Brown

* Cement Stabilised
\# Lime Stabilised
$ Gypsum Stabilised

Report Date 21/09/2023

NATA
Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au

Imagery © NearMap.com

LEGEND

● Density Test

0 10 20 30 40 50m

Scale 1:1000

GEOTECH TESTING PTY LTD ®
34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321
Ph: 02 4722 2744
e-mail:info@geotech.com.au
www.geotech.com.au

Daracon Contractors Pty Ltd
Newpark Precinct 7F
Marsden Park

Field Density Test Locations

Drawing No: 8599/115-1
Job No: 8599/115
Drawn By: MH
Date: 25 September 2023
Checked By: BN

File No: 8599-115
Layers: 0, Lay1