Pacific Geotech
Consulting Geotechnical Engineers

EARTHWORKS CERTIFICATION

LEVEL 1 INSPECTION & TESTING PROGRAM

Cowell Drive

Burleigh Heads

CCA Winslow

February 2023

PG-3614-A

E: info@pacgeo.com.au
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Pacific Geotech
Consulting Geotechnical Engineers

Ref: PG-3614-A, 2023-02-16, LVR VER 1
Author: Ben Elsmore

22nd February, 2023

CCA Winslow
Email: adond@ccawinslow.com.au
CC: anthonyrosario@ccawinslow.com.au

ATTN: ADON DINSMORE

Dear Sir,

EARTHWORKS CERTIFICATION - LEVEL 1 INSPECTION & TESTING PROGRAM – PROPOSED 'THE ARBOUR' RESIDENTIAL DEVELOPMENT - COWELL DRIVE, BURLEIGH HEADS

1.0 INTRODUCTION

This report summarises the results of the Level 1 Geotechnical Inspection and Testing program for the proposed carried out by Pacific Geotech Pty Ltd at the above site between June, 2021 and February, 2023 during the bulk earthworks program.

The scope of the geotechnical services provided comprised the following:

- Topsoil/unsuitable stripping.
- Stripped surface assessments including proof roll testing of the exposed subgrade.
- Subgrade replacement works (Lots 15 to 20) involving the removal of unsuitable material with a gully area and replacement using crushed rock fill.
- Supervision of the placement of general fill material with associated nuclear densometer testing.

The fill material used was assessed to be suitable for use as structural fill and generally comprised a clay fill material with varying quantities of sand and gravel. In localised areas, crushed metasiltstone rock (clayey sandy gravel/gravelly clay) was also used. Over-sized particles exceeding 75mm in size were removed during placement. The material was generally free from organics and deleterious material. Unsuitable material, where identified was removed from the fill mass and stockpiled for removal from site.

Supervision was generally carried out by Ben Elsmore, Samuel Downie and Sothea Bun of our office.

2.0 LEVEL 1 INSPECTION & TESTING PROGRAM

2.1 Project Specifications

The engineering inspection and testing program was carried out in general accordance with AS 3798-2007, 'Guidelines on earthworks for commercial and residential developments', Sections 8.2, 'Level 1 Inspection and Testing'.

Project compaction criteria for the earthworks adopted are summarised in Table 1.

TABLE 1 PROJECT COMPACTION SPECIFICATION

Location	Minimum Dry Density Ratio (%)
Building Area	95
Behind Retaining Walls	95
Road Subgrade	98
Note: The recommended compaction is a percentage of the Maximum Dry Density determined by Australian Standard 1289 5.1.1 (Standard Compaction).	

2.2 Compaction Methodology

Compaction was carried generally carried out using a 12 tonne, vibratory pad foot roller with fill layers of approximately 200mm-300mm (loose) layer thickness.

Proof rolling carried out at each fill later and at the completion of backfill works, indicated no appreciable movement. Areas which displayed excessive movement were reworked or removed and replaced using select fill and a subsequent proof roll carried out.

2.3 Field Density Testing

Compaction control testing was carried out by nuclear field density testing (test method AS1289 5.8.1). Testing was carried out at a frequency in general accordance with AS 3798-2007, Table 8.1 'Frequency of Field Density Tests'. A total of 80 tests were undertaken during the backfill works within these Lots.

The density test results are presented on the Dry Density Ratio Reports. The reports detail the test number, the date of the test, the location of the test and the relative level of the test location together with the test results.

The reports are identified by the following report numbers.

TABLE 2 TEST REPORT SUMMARY

Report Number	Lot/Road Number	Date of Test	Dry Density Ratio (%)
AGT30021-1	7	2/6/2021	99.0
AGT30021-2	11	7/6/2021	97.0
AGT30021-2	14	7/6/2021	97.5
AGT30021-2	15	7/6/2021	96.5
AGT30021-3	8	8/6/2021	95.0
AGT30021-3	10	8/6/2021	97.5
AGT30021-3	16	8/6/2021	98.5
AGT30021-4	34	10/6/2021	95.5
AGT30021-4	11	10/6/2021	98.5
AGT30021-4	28	10/6/2021	97.0
AGT30021-5	27	14/6/2021	99.0
AGT30021-5	14	14/6/2021	96.5
AGT30021-6	31	15/6/2021	96.5
AGT30021-7	14	17/6/2021	98.0
AGT30021-7	27	17/6/2021	96.0
AGT30021-7	30	17/6/2021	97.5
AGT30021-7	30	17/6/2021	97.0
AGT30021-8	29	21/6/2021	97.5
AGT30021-9	19	28/6/2021	97.0
AGT30021-9	29	28/6/2021	95.5
AGT30021-12	31	13/7/2021	97.0
AGT30021-14	26	19/7/2021	97.5
AGT30021-15	28	20/7/2021	96.5
AGT30021-16	26	21/7/2021	98.0
AGT30021-17	26	22/7/2021	98.5
AGT30021-20	17	3/8/2021	99.0
AGT30021-21	19	4/8/2021	101.5
AGT30021-22	19	5/8/2021	97.0
AGT30021-23	19	13/8/2021	95.0
AGT30021-24	45	17/8/2021	99.5
AGT30021-25	47	18/8/2021	98.0
AGT30021-26	45	7/9/2021	97.0
AGT30021-27	19	10/9/2021	97.5
AGT30021-28	45	15/9/2021	98.0
AGT30021-29	45	23/9/2021	98.0
AGT30021-30	43	24/9/2021	99.5
AGT30021-32	Road 1	20/10/2021	97.5*
AGT30021-32	Road 1	20/10/2021	99.0+
AGT30021-33	43	26/10/2021	98.5
AGT30021-33	37	26/10/2021	96.5
AGT30021-34	45	29/10/2021	96.0
AGT30021-34	46	29/10/2021	98.0
AGT30021-35	46	1/11/2021	95.0
AGT30021-35	44	1/11/2021	97.5
AGT30021-36	44	2/11/2021	96.5
AGT30021-36	45	2/11/2021	96.5
AGT30021-37	36	4/11/2021	96.0
AGT30021-37	43	4/11/2021	98.0
AGT30021-38	Road 1	5/11/2021	98.5
AGT30021-38	Road 1	5/11/2021	98.5
AGT30021-40	1004	20/11/2021	96.5

Report Number	Lot/Road Number	Date of Test	Dry Density Ratio (%)
AGT30021-40	1004	20/11/2021	98.5
AGT30021-40	1004	20/11/2021	97.5
AGT30021-41	1004	20/11/2021	96.5
AGT30021-41	1004	20/11/2021	98.5
AGT30021-41	1004	20/11/2021	97.5
PG-3614-A-1	1004	14/6/2022	98.5
PG-3614-A-1	1004	14/6/2022	101.0
PG-3614-A-2	1004	20/6/2022	100.5
PG-3614-A-2	1004	20/6/2022	99.0
PG-3614-A-2	1004	20/6/2022	96.0
PG-3614-A-3	1004	7/11/2022	92.5*
PG-3614-A-3	1004	7/11/2022	94.5*
PG-3614-A-3	1004	7/11/2022	98.0
PG-3614-A-3	1004	7/11/2022	101.5
PG-3614-A-3	1004	7/11/2022	101.5
PG-3614-A-3	1004	7/11/2022	97.5
PG-3614-A-3	1004	7/11/2022	95.0
PG-3614-A-3	1004	7/11/2022	97.5
PG-3614-A-3	1004	7/11/2022	90.0*
PG-3614-A-3	62	7/11/2022	104.5
PG-3614-A-4	Wetlands	21/12/2022	98.0
PG-3614-A-4	Wetlands	21/12/2022	97.5
PG-3614-A-5	1004	15/2/2023	103.0
PG-3614-A-5	1004	15/2/2023	97.5
PG-3614-A-5	1004	15/2/2023	98.5
PG-3614-A-5	1004	15/2/2023	99.0
PG-3614-A-6	19	15/2/2023	96.5
PG-3614-A-7	19	20/2/2023	98.5
PG-3614-A-8	19	22/2/2023	96.5

Notes:
* - Denotes a failed test. Retest taken.
+ - Denotes a retest from a failed test result.

Given the supervision and testing regime adopted, it should be noted that testing is not undertaken on a per lot basis, but rather the extent of works undertaken. Some individual allotments may not have a specific test undertaken. This is an expected outcome given the testing regime adopted.

Proof rolling was carried out at the completion of the bulk earthworks, which indicated no appreciable movement, at time of proof roll.

3.0 GENERAL STATEMENT OF COMPLIANCE

Pacific Geotech Pty Ltd certify that the bulk earthworks within 'The Arbour' residential development at Cowell Drive, Burleigh Heads estate have been carried out in a responsible manner and in accordance with the project specification, under a Level 1 Inspection And Testing Program in accordance with AS 3798-2007 guidelines.

The fill may be deemed 'Controlled' fill in accordance with AS 2870-2011 'Residential slabs and footings' clause 6.4.2 'Filling'.

Should you have any queries regarding the Earthworks program please do not hesitate to contact Ben Elsmore or Peter Elkington at our office

Yours faithfully,

B. ELSMORE (RPEQ 19656)

For and on behalf of
PACIFIC GEOTECH PTY LTD

Attached: Site Photographs
Dry Density Ratio Reports

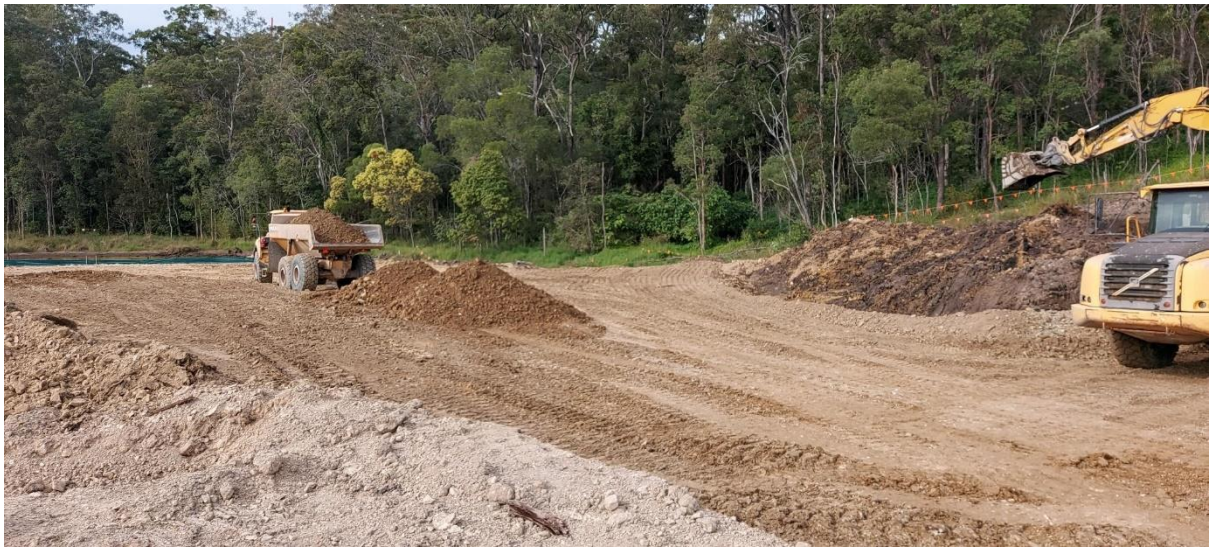

Image A – Construction of the bridging layer on Lots 15-17

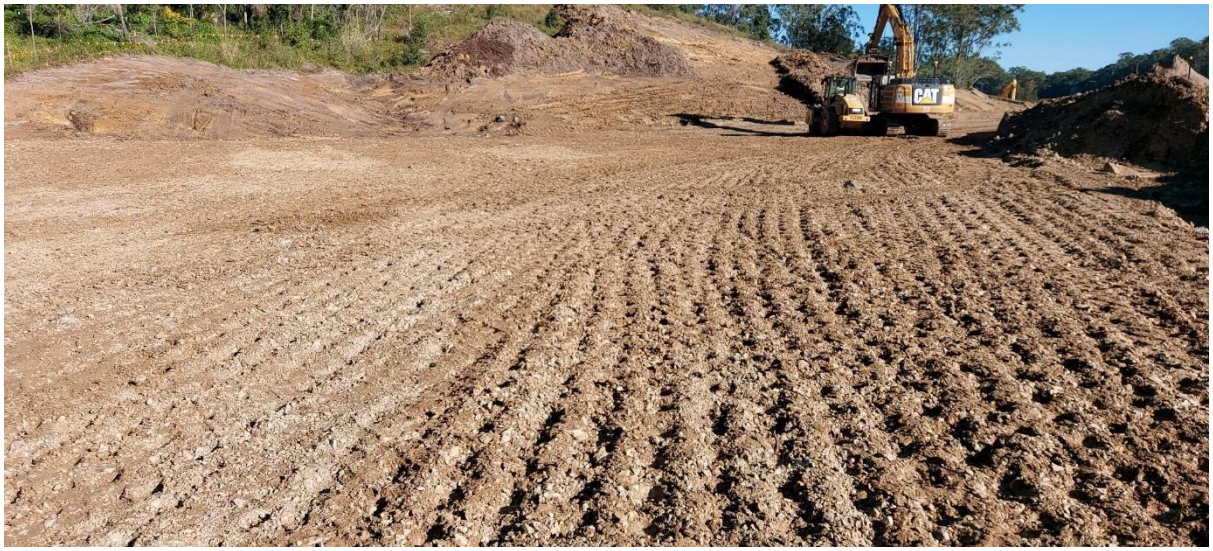

Image B – Placement of fill on Lots 14-17

Image C – Placement of Fill over the bridging layer on Lot 14

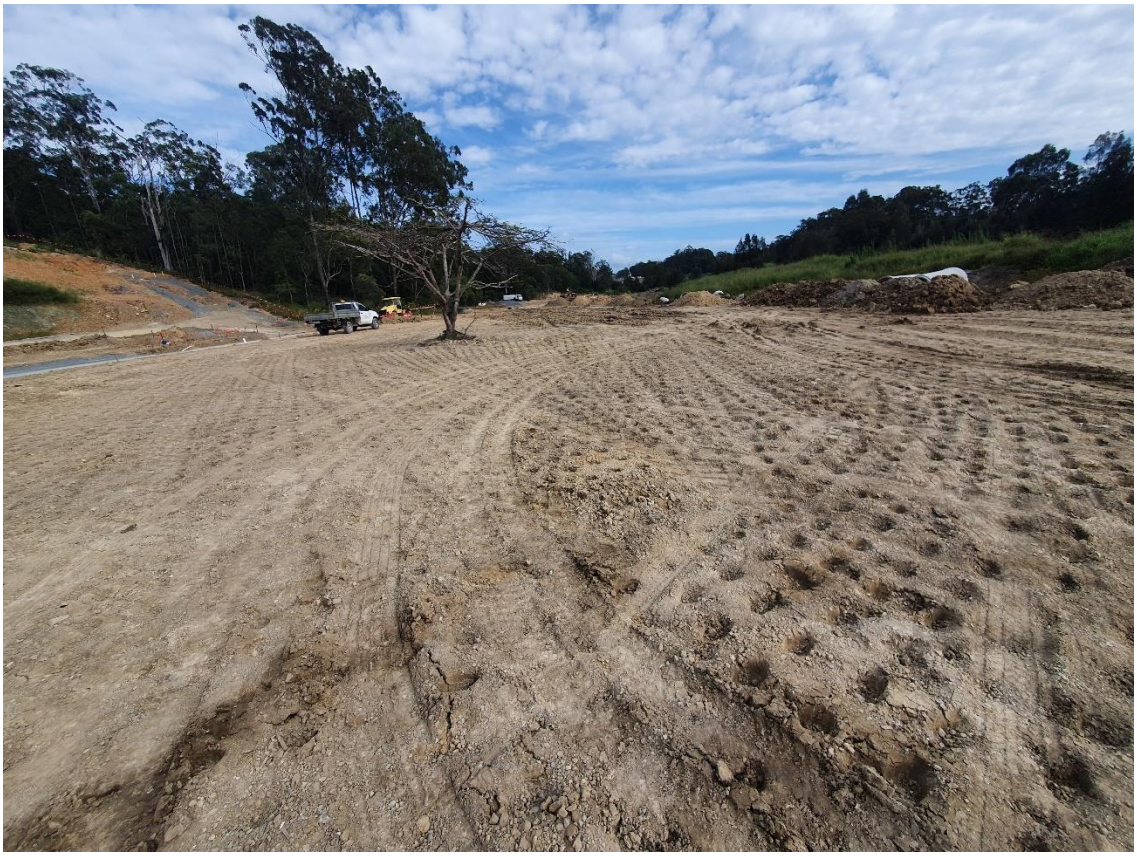

Image D – Master Lot 1004

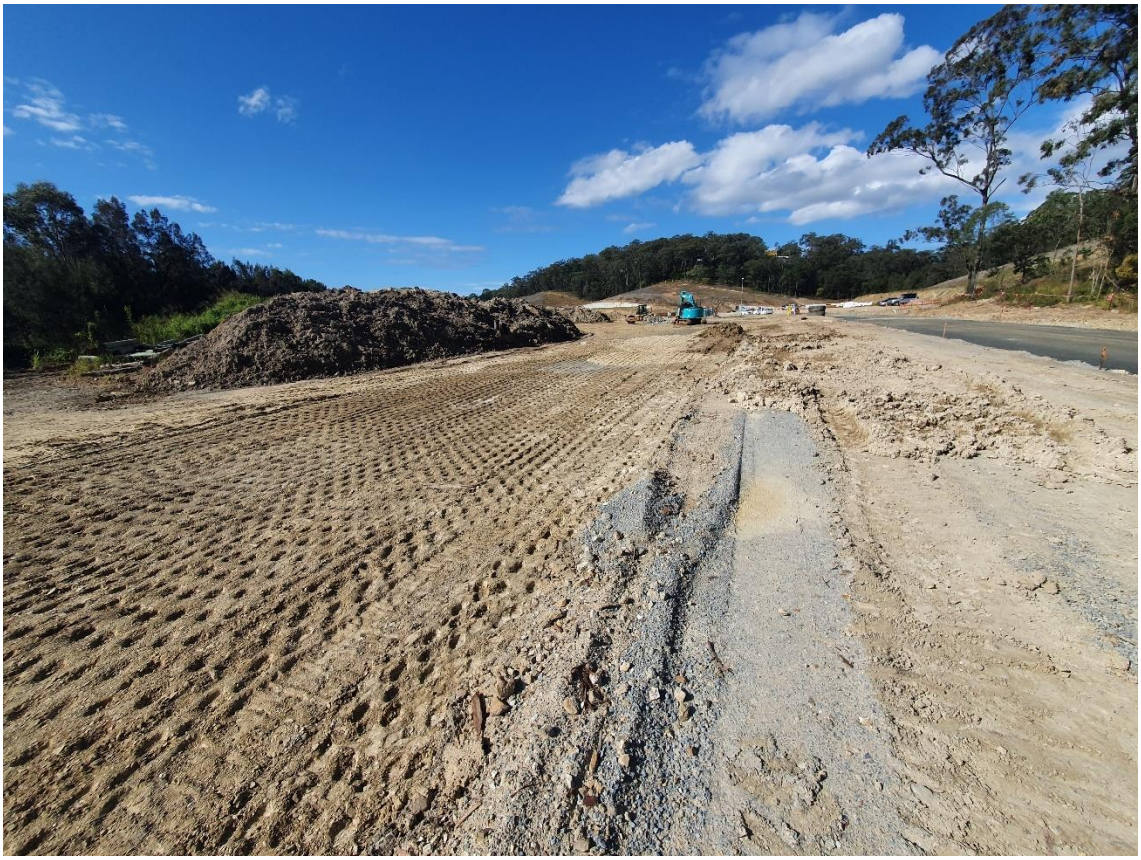

Image E – Master Lot 1004

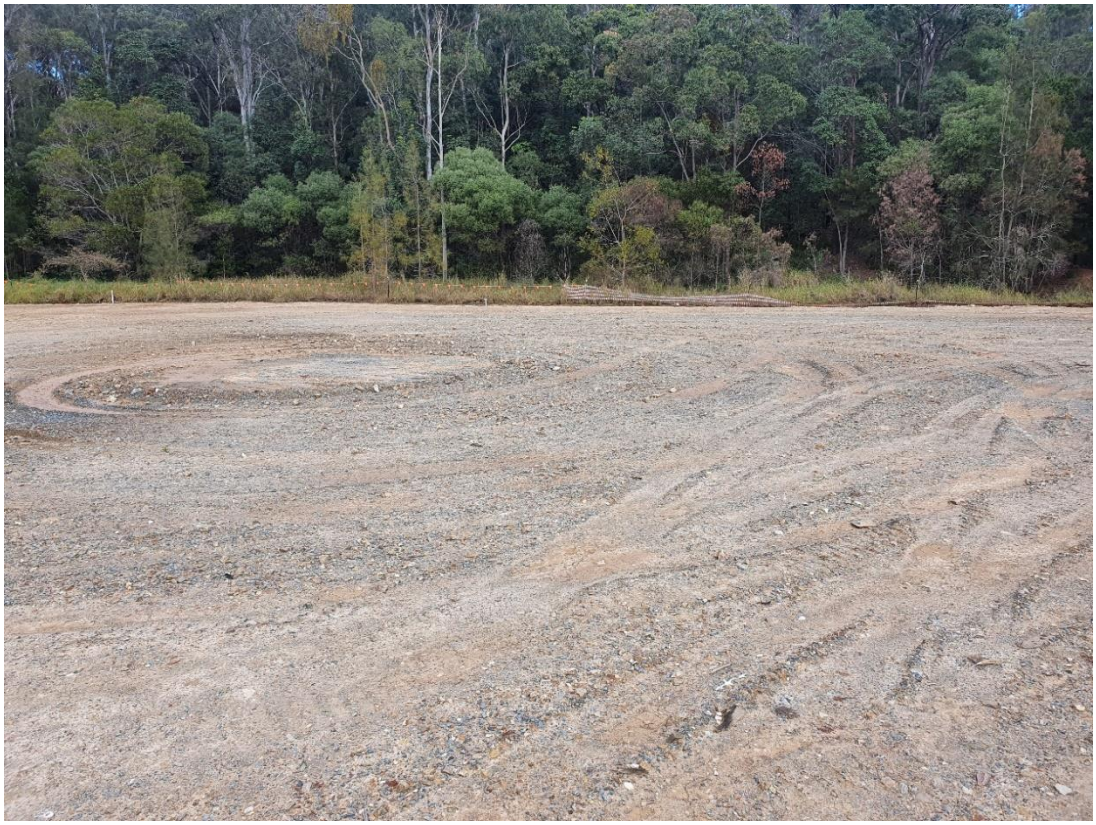

Image F – Lots 61 and 62

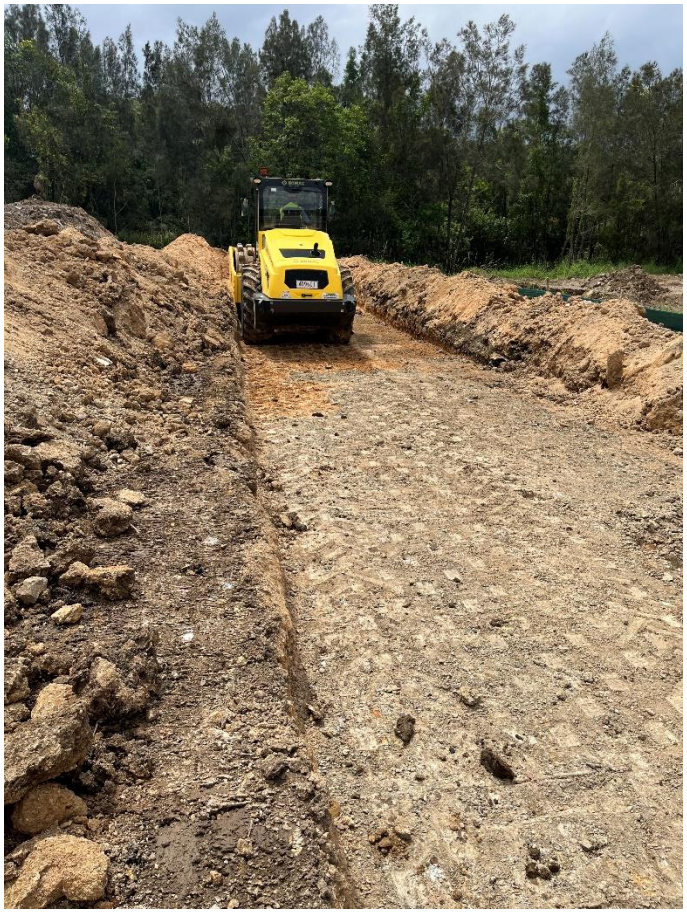

Image G – Rework of Master Lot 1004

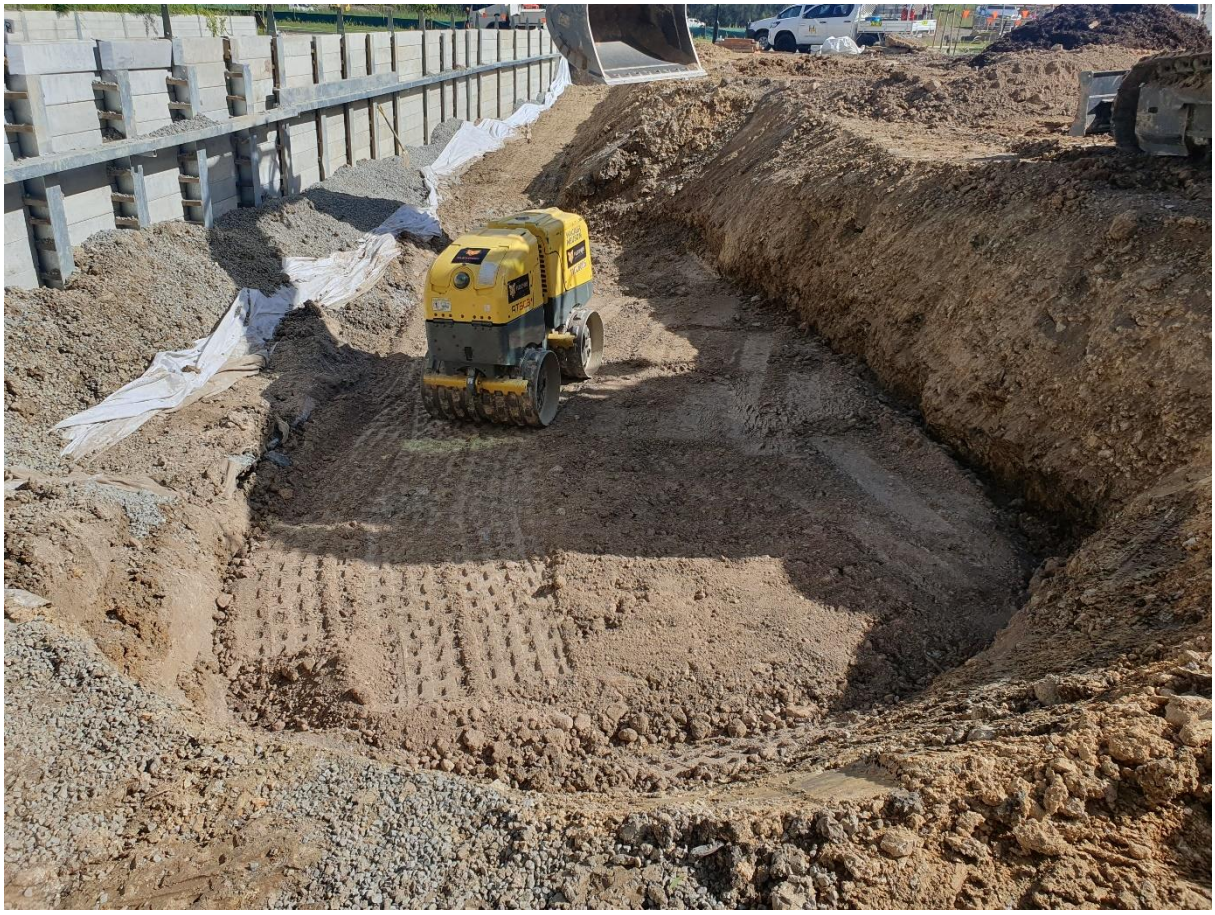

Image H – Compaction of the fill material behind the retaining wall on Lot 19

Material Test Report

Report Number: **AGT30021-1**
Issue Number: 1
Date Issued: 04/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Burleigh Heads
Work Request: 7
Date Sampled: 02/06/2021
Dates Tested: 02/06/2021 - 03/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 98% STD
Location: Cowell Drive, Burleigh Heads
Lot Number: 7
Material: Silty Sandy Gravel - Brown
Material Source: Onsite Crushed rock

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-1		
Date Tested	02/06/2021		
Time Tested	15:00		
Test Request #/Location	Lot 7 - 5m N of S Boundary, 5m E of W Boundary		
Elevation (m)	FL		
Thickness of Layer (mm)	-		
Soil Description	Silty Sandy Gravel - Brown		
Test Depth (mm)	200		
Fraction Tested (mm)	37.5		
Oversize (wet basis) %	8		
Oversize (dry basis) %	8		
Curing Hours	2		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m^3	2.32		
Field Moisture Content %	6.2		
Field Dry Density t/m^3	2.19		
Maximum Dry Density t/m^3	2.18		
Adjusted Maximum Dry Density t/m^3	2.21		
Optimum Moisture Content %	9.0		
Adjusted Optimum Moisture Content %	8.5		
Moisture Variation %	2.0		
Moisture Ratio %	74.5		
Density Ratio %	**99.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Results relate only to the items tested/sampled.

Material Test Report

Report Number: **AGT30021-2**
Issue Number: 1
Date Issued: 10/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Burleigh Heads
Work Request: 9
Date Sampled: 07/06/2021
Dates Tested: 07/06/2021 - 10/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Cowell Drive, Burleigh Heads
Lot Number: 11,14,15
Material: Onsite
Material Source: Onsite

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-2	30021-3	30021-4
Date Tested	07/06/2021	07/06/2021	07/06/2021
Time Tested	12:00	12:20	12:40
Test Request #/Location	Lot 11 - 4m S of N boundary, 3.5m E of W boundary	Lot 14 - 2m S of N boundary, 2.5m W of E boundary	Lot 15 - 1.5m S of N boundary, 2.5m E of W boundary
Elevation (m)	RL: 6.75	RL: 5.98	RL: 5.44
Layer / Reduced Level	-	-	-
Thickness of Layer (mm)	-	-	-
Soil Description	Silty sandy clay Light Brown	Sandy clay Dark Brown	Sandy clay Dark Brown
Test Depth (mm)	200	200	200
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	4	**	**
Oversize (dry basis) %	5	**	**
Curing Hours	2.0	2.0	2.0
Method used to Determine Plasticity	**	**	**
Field Wet Density t/m^3	2.04	1.99	2.00
Field Moisture Content %	18.9	9.0	10.5
Field Dry Density t/m^3	1.72	1.83	1.81
Maximum Dry Density t/m^3	1.74	1.88	1.87
Adjusted Maximum Dry Density t/m^3	1.77	**	**
Optimum Moisture Content %	20.0	11.0	11.5
Adjusted Optimum Moisture Content %	19.0	**	**
Moisture Variation %	0.5	2.0	1.0
Moisture Ratio %	98.5	81.5	93.0
Density Ratio %	**97.0**	**97.5**	**96.5**
Compaction Method	**Standard**	**Standard**	**Standard**

Moisture Variation Note:

Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-3**
Issue Number: 1
Date Issued: 11/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 10
Date Sampled: 08/06/2021
Dates Tested: 08/06/2021 - 09/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 8,10,16
Material: Onsite
Material Source: Onsite

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-5	30021-6	30021-7
Date Tested	08/06/2021	08/06/2021	08/06/2021
Time Tested	12:00	12:30	12:50
Test Request #/Location	Lot 8 - 2m S of N boundary, 3m E of W boundary	Lot 10 - 4m S of N boundary, 4m W of E boundary	Lot 16 - 2m N of S boundary, 3.5m E of W boundary
Elevation (m)	FL	FL	FL
Layer / Reduced Level	FL	FL	FL
Thickness of Layer (mm)	-	-	-
Soil Description	Silty sandy gravel Brown	Sandy clay gravel Dark Brown	Sandy clay gravel Dark Brown
Test Depth (mm)	200	200	200
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	16	**	**
Oversize (dry basis) %	16	**	**
Curing Hours	2.0	**	**
Method used to Determine Plasticity	**	**	**
Field Wet Density t/m^3	2.23	2.16	2.16
Field Moisture Content %	5.3	18.0	16.2
Field Dry Density t/m^3	2.12	1.83	1.86
Maximum Dry Density t/m^3	2.16	1.88	1.88
Adjusted Maximum Dry Density t/m^3	2.22	**	**
Optimum Moisture Content %	7.5	18.0	18.5
Adjusted Optimum Moisture Content %	6.0	**	**
Moisture Variation %	1.0	0.0	2.5
Moisture Ratio %	85.0	99.0	87.5
Density Ratio %	**95.0**	**97.5**	**98.5**
Compaction Method	**Standard**	**Standard**	**Standard**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-4**
Issue Number: 1
Date Issued: 12/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 12
Date Sampled: 10/06/2021
Dates Tested: 10/06/2021 - 11/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 11, 28 & 34
Material: Onsite
Material Source: Onsite

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-8	30021-9	30021-10
Date Tested	10/06/2021	10/06/2021	10/06/2021
Time Tested	08:00	08:20	08:40
Test Request #/Location	Lot 34 - 4m S of N Boundary, 5m E of W Boundary	Lot 11 - 3m S of N Boundary, 5m E of W Boundary	Lot 28 - 3m S of N Boundary, 2m W of E Boundary
Elevation (m)	RL: 5.22	FL	RL: 4.69
Layer / Reduced Level	-	FL	-
Thickness of Layer (mm)	-	-	-
Soil Description	Sandy clay Dark brown	Sandy clay Dark brown	Sandy clay Dark brown
Test Depth (mm)	150	150	150
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	**	**	**
Oversize (dry basis) %	**	**	**
Curing Hours	**	**	**
Method used to Determine Plasticity	**	**	**
Field Wet Density t/m^3	1.94	2.24	1.98
Field Moisture Content %	13.2	10.4	24.1
Field Dry Density t/m^3	1.71	2.02	1.59
Maximum Dry Density t/m^3	1.79	2.06	1.64
Adjusted Maximum Dry Density t/m^3	**	**	**
Optimum Moisture Content %	15.5	12.5	24.5
Adjusted Optimum Moisture Content %	**	**	**
Moisture Variation %	2.0	2.0	0.0
Moisture Ratio %	85.5	84.5	99.5
Density Ratio %	**95.5**	**98.5**	**97.0**
Compaction Method	**Standard**	**Standard**	**Standard**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-5**
Issue Number: 1
Date Issued: 17/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 15
Date Sampled: 14/06/2021
Dates Tested: 14/06/2021 - 16/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 14 & 27
Material: Onsite
Material Source: Onsite

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-11	30021-12	
Date Tested	14/06/2021	14/06/2021	
Time Tested	13:00	13:20	
Test Request #/Location	Lot 27 - 1m E of W boundary, 3m S of N boundary	Lot 14 - 3m E of W boundary, 2.5m S of N boundary	
Elevation (m)	RL: 5.34	RL: 8.30	
Layer / Reduced Level	-	-	
Thickness of Layer (mm)	-	-	
Soil Description	Sandy clay Dark Brown	Sandy clay Dark Brown	
Test Depth (mm)	150	150	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	**	**	
Method used to Determine Plasticity	Visual Assessment	Visual Assessment	
Field Wet Density t/m^3	2.08	2.02	
Field Moisture Content %	16.6	16.2	
Field Dry Density t/m^3	1.79	1.73	
Maximum Dry Density t/m^3	1.80	1.80	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	16.0	16.0	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-0.5	0.0	
Moisture Ratio %	102.0	100.5	
Density Ratio %	**99.0**	**96.5**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-6**
Issue Number: 1
Date Issued: 17/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 16
Dates Tested: 15/06/2021 - 16/06/2021
Location: Cowell Drive, Burleigh Heads QLD 4220

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-13		
Date Tested	15/06/2021		
Time Tested	08:45		
Test Request #/Location	Lot 31		
Easting	3452.01		
Northing	703.40		
Elevation (m)	RL: 4.38		
Layer / Reduced Level	-		
Thickness of Layer (mm)	-		
Soil Description	Sandy Graveley clay Brown		
Test Depth (mm)	150		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	**		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m^3	2.10		
Field Moisture Content %	11.2		
Field Dry Density t/m^3	**		
Maximum Dry Density t/m^3	1.95		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	11.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.5		
Moisture Ratio %	96.5		
Density Ratio %	**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-7**
Issue Number: 1
Date Issued: 21/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 20
Date Sampled: 17/06/2021
Dates Tested: 17/06/2021 - 18/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% STD
Location: Cowell Drive, Burleigh Heads QLD 4220
Material: Onsite
Material Source: Onsite

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Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
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NATA WORLD RECOGNISED ACCREDITATION

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1				
Sample Number	30021-14	30021-15	30021-16	30021-17
Date Tested	17/06/2021	17/06/2021	17/06/2021	17/06/2021
Time Tested	10:00	11:00	12:00	13:00
Test Request #/Location	Lot 14	Lot 27	Lot 30	Lot 30
Easting	3359.71	3430.01	3454.69	3454.95
Northing	6927.20	6974.90	7027.95	7024.74
Elevation (m)	8.70	6.00	3.99	3.78
Layer / Reduced Level	-	-	-	-
Thickness of Layer (mm)	-	-	-	-
Soil Description	Sandy clay Brown	Sandy clay Brown	Sandy clay Brown	Sandy clay Brown
Test Depth (mm)	150	150	150	150
Fraction Tested (mm)	19.0	19.0	19.0	19.0
Oversize (wet basis) %	0	0	0	0
Oversize (dry basis) %	0	0	0	0
Curing Hours	24.0	24.0	24.0	24.0
Method used to Determine Plasticity	Visual Assessment	Visual Assessment	Visual Asesement	Visual Assessment
Field Wet Density t/m^3	2.00	1.98	2.06	2.06
Field Moisture Content %	16.3	17.5	13.6	13.2
Field Dry Density t/m^3	1.72	1.68	1.82	1.82
Maximum Dry Density t/m^3	1.75	1.75	1.86	1.87
Adjusted Maximum Dry Density t/m^3	**	**	**	**
Optimum Moisture Content %	16.0	17.0	14.5	15.5
Adjusted Optimum Moisture Content %	**	**	**	**
Moisture Variation %	-0.5	-0.5	1.0	2.5
Moisture Ratio %	103.5	104.0	94.5	85.5
Density Ratio %	**98.0**	**96.0**	**97.5**	**97.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-8**
Issue Number: 1
Date Issued: 23/06/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 22
Dates Tested: 21/06/2021 - 22/06/2021
Location: Cowell Drive, Burleigh Heads QLD 4220

Australian Geotechnical Testing
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Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
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Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-18		
Date Tested	21/06/2021		
Time Tested	11:00		
Test Request #/Location	Lot 29		
Easting	3455.82		
Northing	7007.109		
Elevation (m)	4.12		
Layer / Reduced Level	-		
Thickness of Layer (mm)	-		
Soil Description	Gravelly sandy clay Dark Brown		
Test Depth (mm)	150		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	2.0		
Method used to Determine Plasticity	Visual Assessment		
Field Wet Density t/m^3	2.23		
Field Moisture Content %	9.3		
Field Dry Density t/m^3	2.04		
Maximum Dry Density t/m^3	2.09		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	10.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	1.0		
Moisture Ratio %	89.0		
Density Ratio %	**97.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-9**
Issue Number: 1
Date Issued: 02/07/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 34
Date Sampled: 28/06/2021
Dates Tested: 28/06/2021 - 30/06/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD
Material: Gravelly sandy clay Brown
Material Source: Onsite

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Brisbane Laboratory - Branch
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Email: info@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-19	30021-20	
Date Tested	28/06/2021	28/06/2021	
Time Tested	08:00	09:00	
Test Request #/Location	Refer to plan	Lot 29	
Easting	3456.96	3459.68	
Northing	7092.18	6997.0	
Elevation (m)	5.67	4.78	
Layer / Reduced Level	-	-	
Thickness of Layer (mm)	-	-	
Soil Description	Gravelly sandy clay brown	Gravelly sandy clay brown	
Test Depth (mm)	150	150	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	2.0	2.0	
Method used to Determine Plasticity	Visual/tactile	Visual/tactile	
Field Wet Density t/m^3	1.90	2.16	
Field Moisture Content %	21.2	18.3	
Field Dry Density t/m^3	1.57	1.83	
Maximum Dry Density t/m^3	1.62	1.91	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	21.5	20.5	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	0.5	2.5	
Moisture Ratio %	98.0	88.5	
Density Ratio %	**97.0**	**95.5**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-12**
Issue Number: 1
Date Issued: 20/07/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 54
Dates Tested: 13/07/2021 - 17/07/2021
Location: Cowell Drive, Burleigh Heads QLD 4220

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Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-21		
Date Tested	13/07/2021		
Time Tested	07:50		
Test Request #/Location	Lot 31		
Easting	3450.35		
Northing	702247		
Elevation (m)	6.56		
Layer / Reduced Level	FSL		
Thickness of Layer (mm)	200		
Soil Description	Clayey sandy gravel Brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	16.0		
Method used to Determine Plasticity	Visual/tactile		
Field Wet Density t/m^3	2.26		
Field Moisture Content %	11.5		
Field Dry Density t/m^3	2.03		
Maximum Dry Density t/m^3	2.09		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	13.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	2.0		
Moisture Ratio %	84.0		
Density Ratio %	**97.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-14**
Issue Number: 1
Date Issued: 22/07/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 63
Date Sampled: 19/07/2021
Dates Tested: 19/07/2021 - 21/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 26
Material: Fill
Material Source: Onsite

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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-24		
Date Tested	19/07/2021		
Time Tested	14:30		
Test Request #/Location	Lot 26		
Easting	3452.38		
Northing	6976.48		
Elevation (m)	5.63		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clayey Sandy Gravel Light Brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	2.0		
Method used to Determine Plasticity	Visual/tactile		
Field Wet Density t/m^3	2.13		
Field Moisture Content %	14.1		
Field Dry Density t/m^3	1.86		
Maximum Dry Density t/m^3	1.91		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	16.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	2.0		
Moisture Ratio %	87.5		
Density Ratio %	**97.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-15**
Issue Number: 1
Date Issued: 22/07/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 64
Date Sampled: 20/07/2021
Dates Tested: 20/07/2021 - 21/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 28
Material: Fill
Material Source: Onsite

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NATA WORLD RECOGNISED ACCREDITATION

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-25		
Date Tested	20/07/2021		
Time Tested	14:00		
Test Request #/Location	Lot 28		
Easting	3434.57		
Northing	6980.57		
Elevation (m)	5.72		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay/Mudstone Light Brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	24.5		
Method used to Determine Plasticity	Visual/tactile		
Field Wet Density t/m^3	2.09		
Field Moisture Content %	14.0		
Field Dry Density t/m^3	1.84		
Maximum Dry Density t/m^3	1.90		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	18.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	4.0		
Moisture Ratio %	77.0		
Density Ratio %	**96.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-16**
Issue Number: 1
Date Issued: 28/07/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 78
Date Sampled: 21/07/2021
Dates Tested: 21/07/2021 - 26/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 26
Material: Fill
Material Source: Onsite

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Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-28		
Date Tested	21/07/2021		
Time Tested	13:00		
Test Request #/Location	Lot-26		
Easting	3455.76		
Northing	6980.39		
Elevation (m)	6.22		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay Mudstone Light Brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	120.5		
Method used to Determine Plasticity	Visual/tactile		
Field Wet Density t/m^3	2.15		
Field Moisture Content %	13.3		
Field Dry Density t/m^3	1.90		
Maximum Dry Density t/m^3	1.93		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	13.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.0		
Moisture Ratio %	99.5		
Density Ratio %	**98.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-17**
Issue Number: 1
Date Issued: 28/07/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 73
Date Sampled: 22/07/2021
Dates Tested: 22/07/2021 - 26/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: 26
Material: Fill
Material Source: Onsite

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Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-27		
Date Tested	22/07/2021		
Time Tested	12:30		
Test Request #/Location	Lot-26		
Easting	3448.80		
Northing	6955.11		
Elevation (m)	6.70		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay/Mudstone Light Brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	97.0		
Method used to Determine Plasticity	Visual/tactile		
Field Wet Density t/m^3	2.15		
Field Moisture Content %	12.1		
Field Dry Density t/m^3	1.92		
Maximum Dry Density t/m^3	1.94		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	12.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.0		
Moisture Ratio %	102.0		
Density Ratio %	**98.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-20**
Issue Number: 1
Date Issued: 07/08/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 102
Date Sampled: 03/08/2021
Dates Tested: 03/08/2021 - 05/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-17
Material: Clay/Mudstone Light Brown
Material Source: Onsite

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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-30		
Date Tested	03/08/2021		
Time Tested	14:00		
Test Request #/Location	Lot-17		
Easting	3415.65		
Northing	6904.88		
Elevation (m)	5.11		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay/Mudstone light brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	49.0		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.13		
Field Moisture Content %	8.6		
Field Dry Density t/m^3	1.96		
Maximum Dry Density t/m^3	1.98		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	9.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	1.0		
Moisture Ratio %	91.0		
Density Ratio %	**99.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-21**
Issue Number: 1
Date Issued: 07/08/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 103
Date Sampled: 04/08/2021
Dates Tested: 04/08/2021 - 06/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-19
Material: Clay Fill (Brown)
Material Source: Onsite

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NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-31		
Date Tested	04/08/2021		
Time Tested	13:30		
Test Request #/Location	Lot-19		
Easting	3456.20		
Northing	6923.25		
Elevation (m)	3.86		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay Fill (Brown)		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	49.0		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	1.98		
Field Moisture Content %	21.7		
Field Dry Density t/m^3	1.63		
Maximum Dry Density t/m^3	1.60		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	20.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	-1.5		
Moisture Ratio %	107.0		
Density Ratio %	**101.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-22**
Issue Number: 1
Date Issued: 12/08/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 112
Date Sampled: 05/08/2021
Dates Tested: 05/08/2021 - 09/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-19
Material: Sandy Clay Light Brown
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-32		
Date Tested	05/08/2021		
Time Tested	13:00		
Test Request #/Location	Lot-19		
Easting	3454.223		
Northing	6922.657		
Elevation (m)	5.352		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Light Brown Sandy Clay		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	89.5		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.07		
Field Moisture Content %	11.0		
Field Dry Density t/m^3	1.87		
Maximum Dry Density t/m^3	1.92		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	11.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.5		
Moisture Ratio %	94.5		
Density Ratio %	**97.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-23**
Issue Number: 1
Date Issued: 17/08/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 125
Date Sampled: 13/08/2021
Dates Tested: 13/08/2021 - 16/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-19
Material: Light Brown Gravel/Clay
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-33		
Date Tested	13/08/2021		
Time Tested	13:15		
Test Request #/Location	Lot-19		
Easting	3455.96		
Northing	6912.18		
Elevation (m)	6.00		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Light Brown Gravel/Clay		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	72.5		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.09		
Field Moisture Content %	8.7		
Field Dry Density t/m^3	1.93		
Maximum Dry Density t/m^3	2.03		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	8.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	-0.5		
Moisture Ratio %	103.5		
Density Ratio %	**95.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-24**
Issue Number: 1
Date Issued: 23/08/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 133
Date Sampled: 17/08/2021
Dates Tested: 17/08/2021 - 19/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-45
Material: Gravelly Clay Light Brown
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-34		
Date Tested	17/08/2021		
Time Tested	14:00		
Test Request #/Location	Lot-45		
Easting	3539.94		
Northing	7164.86		
Elevation (m)	5.500		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Gravelly Clay		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	49.0		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.02		
Field Moisture Content %	19.0		
Field Dry Density t/m^3	1.70		
Maximum Dry Density t/m^3	1.71		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	19.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.0		
Moisture Ratio %	100.0		
Density Ratio %	**99.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-25**
Issue Number: 1
Date Issued: 23/08/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 134
Date Sampled: 18/08/2021
Dates Tested: 18/08/2021 - 20/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-47
Material: Clay/Gravel Light Brown
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-35		
Date Tested	18/08/2021		
Time Tested	10:00		
Test Request #/Location	Lot-47		
Easting	3544.32		
Northing	7185.30		
Elevation (m)	6.00		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay/Gravel Light Brown		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	48.7		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.16		
Field Moisture Content %	12.2		
Field Dry Density t/m^3	1.92		
Maximum Dry Density t/m^3	1.96		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	12.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.0		
Moisture Ratio %	100.5		
Density Ratio %	**98.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-26**
Issue Number: 1
Date Issued: 13/09/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 168
Date Sampled: 07/09/2021
Dates Tested: 07/09/2021 - 09/09/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: Selected by Client
Location: Cowell Drive, Burleigh Heads QLD 4220
Material: Clay Fill
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-37		
Date Tested	07/09/2021		
Time Tested	07:20		
Test Request #/Location	Lot-45		
Easting	3473.32		
Northing	6913.69		
Elevation (m)	6.80		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay fill		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	49.0		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.00		
Field Moisture Content %	15.4		
Field Dry Density t/m^3	1.73		
Maximum Dry Density t/m^3	1.79		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	15.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	-0.5		
Moisture Ratio %	102.0		
Density Ratio %	**97.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-27**
Issue Number: 1
Date Issued: 13/09/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 170
Date Sampled: 10/09/2021
Dates Tested: 10/09/2021 - 11/09/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: Selected by Client
Location: Cowell Drive, Burleigh Heads QLD 4220
Material: Clay/Gravel
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-36		
Date Tested	10/09/2021		
Time Tested	14:00		
Test Request #/Location	Lot-19		
Easting	3473.2		
Northing	6913.6		
Elevation (m)	6.80		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay/Gravel		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	26.0		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.06		
Field Moisture Content %	14.3		
Field Dry Density t/m^3	1.81		
Maximum Dry Density t/m^3	1.85		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	14.0		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	-0.5		
Moisture Ratio %	103.5		
Density Ratio %	**97.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-28**
Issue Number: 1
Date Issued: 20/09/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 178
Date Sampled: 15/09/2021
Dates Tested: 15/09/2021 - 17/09/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: Selected by Client
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: lots 44-46
Material: Clay/Gravel
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-38		
Date Tested	15/09/2021		
Time Tested	13:15		
Test Request #/Location	Lot-45		
Easting	3538.5		
Northing	7137.6		
Elevation (m)	5.89		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	48.2		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	1.92		
Field Moisture Content %	14.8		
Field Dry Density t/m^3	1.68		
Maximum Dry Density t/m^3	1.71		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	14.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	-0.5		
Moisture Ratio %	102.0		
Density Ratio %	**98.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-29**
Issue Number: 1
Date Issued: 29/09/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 185
Date Sampled: 23/09/2021
Dates Tested: 23/09/2021 - 28/09/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot-45
Material: Clay/Gravel Light Brown
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-42		
Date Tested	23/09/2021		
Time Tested	14:00		
Test Request #/Location	Lot-45		
Easting	3549.0		
Northing	7153.4		
Elevation (m)	7.3		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay/Mudstone		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	89.5		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.16		
Field Moisture Content %	17.4		
Field Dry Density t/m^3	1.84		
Maximum Dry Density t/m^3	1.88		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	17.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	0.0		
Moisture Ratio %	99.0		
Density Ratio %	**98.0**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-30**
Issue Number: 1
Date Issued: 29/09/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 186
Date Sampled: 24/09/2021
Dates Tested: 24/09/2021 - 28/09/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: lot-
Material: Clay/Mudstone
Material Source: Imported Landtrak

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-43		
Date Tested	24/09/2021		
Time Tested	12:00		
Test Request #/Location	Lot-43		
Easting	3537.7		
Northing	7133.8		
Elevation (m)	7.00		
Layer / Reduced Level	Fill		
Thickness of Layer (mm)	200		
Soil Description	Clay Fill		
Test Depth (mm)	175		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	0		
Oversize (dry basis) %	0		
Curing Hours	94.5		
Method used to Determine Plasticity	**		
Field Wet Density t/m^3	2.12		
Field Moisture Content %	14.4		
Field Dry Density t/m^3	1.86		
Maximum Dry Density t/m^3	1.87		
Adjusted Maximum Dry Density t/m^3	**		
Optimum Moisture Content %	16.5		
Adjusted Optimum Moisture Content %	**		
Moisture Variation %	2.0		
Moisture Ratio %	88.0		
Density Ratio %	**99.5**		
Compaction Method	**Standard**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-32**
Issue Number: 1
Date Issued: 28/10/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 224
Date Sampled: 20/10/2021
Dates Tested: 20/10/2021 - 03/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 98% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Road-1
Material: Gravel/Clay
Material Source: Onsite

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Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-45	30021-46	
Date Tested	20/10/2021	20/10/2021	
Time Tested	10:30	13:00	
Test Request #/Location	Road-1	Road-1	
Easting	2906.2	2959.2	
Northing	7147.8	7147.8	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Gravel/Clay	Gravel/Clay	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	94.0	94.3	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.10	2.13	
Field Moisture Content %	11.7	12.2	
Field Dry Density t/m^3	1.88	1.90	
Maximum Dry Density t/m^3	1.92	1.92	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	11.0	12.0	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-1.0	0.0	
Moisture Ratio %	107.5	101.5	
Density Ratio %	**97.5**	**99.0**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-33**
Issue Number: 1
Date Issued: 03/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 228
Date Sampled: 26/10/2021
Dates Tested: 26/10/2021 - 28/10/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Various
Material: Gravel/Clay
Material Source: Onsite

Australian Geotechnical Testing
Branch Site of Melbourne Site No. 22114
Brisbane Laboratory - Branch
101 Natalie Road Buccan QLD 4207
Phone: 1300 026 583
Email: JamesG@ausgeotest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-49	30021-50	
Date Tested	26/10/2021	26/10/2021	
Time Tested	11:00	12:00	
Test Request #/Location	Lot-43	Lot-37	
Easting	3559.4	3526.8	
Northing	7117.30	7110.8	
Elevation (m)	8.01	7.85	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Gravel/Clay Light Brown	Gravel/Clay Light Brown	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	49.5	49.5	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.12	2.16	
Field Moisture Content %	11.2	12.4	
Field Dry Density t/m^3	1.91	1.92	
Maximum Dry Density t/m^3	1.94	2.00	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	9.0	11.5	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-2.0	-1.0	
Moisture Ratio %	121.5	109.5	
Density Ratio %	**98.5**	**96.5**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-34**
Issue Number: 1
Date Issued: 03/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 229
Date Sampled: 29/10/2021
Dates Tested: 29/10/2021 - 01/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.2
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Various
Material: Gravel/Clay Light Brown
Material Source: Onsite

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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-47	30021-48	
Date Tested	29/10/2021	29/10/2021	
Time Tested	10:30	10:40	
Test Request #/Location	Lot-45	Lot-46	
Easting	3543.8	3549.0	
Northing	7144.2	7124.5	
Elevation (m)	7.14	7.85	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Clay Fill	Clay Fill	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	73.2	792.3	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.08	2.09	
Field Moisture Content %	13.5	13.3	
Field Dry Density t/m^3	1.84	1.85	
Maximum Dry Density t/m^3	1.91	1.88	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	13.5	12.5	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	0.0	-0.5	
Moisture Ratio %	101.5	105.5	
Density Ratio %	**96.0**	**98.0**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-35**
Issue Number: 1
Date Issued: 09/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 235
Date Sampled: 01/11/2021
Dates Tested: 01/11/2021 - 06/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot Fill
Material: Clay Fill
Material Source: Import

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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-51	30021-52	
Date Tested	01/11/2021	01/11/2021	
Time Tested	10:15	15:00	
Test Request #/Location	Lot-46	Lot-44	
Easting	3525.6	3549/3	
Northing	7155.2	7136.3	
Elevation (m)	6.28	8.20	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	**	**	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	111.5	111.8	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.08	2.09	
Field Moisture Content %	14.8	13.2	
Field Dry Density t/m^3	1.81	1.85	
Maximum Dry Density t/m^3	1.90	1.89	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	12.5	13.0	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-2.5	-0.5	
Moisture Ratio %	118.0	103.0	
Density Ratio %	**95.0**	**97.5**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-36**
Issue Number: 1
Date Issued: 09/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 236
Date Sampled: 02/11/2021
Dates Tested: 02/11/2021 - 06/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Lot Fill
Material: Clay Fill
Material Source: Import

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Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-53	30021-54	
Date Tested	02/11/2021	02/11/2021	
Time Tested	09:00	13:15	
Test Request #/Location	Lot-44	Lot-45	
Easting	3543.3	3532.8	
Northing	7131.9	7140.5	
Elevation (m)	8.32	6.89	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Gravel/Clay Fill	Gravel/Clay Fill	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	89.8	90.2	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.14	2.16	
Field Moisture Content %	10.6	10.1	
Field Dry Density t/m^3	1.94	1.96	
Maximum Dry Density t/m^3	2.01	2.03	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	10.0	8.0	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-1.0	-2.0	
Moisture Ratio %	108.0	124.0	
Density Ratio %	**96.5**	**96.5**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-37**
Issue Number: 1
Date Issued: 09/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 241
Date Sampled: 04/11/2021
Dates Tested: 04/11/2021 - 06/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Location: Cowell Drive, Burleigh Heads QLD 4220
Material Source: Import

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Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-55	30021-56	
Date Tested	04/11/2021	04/11/2021	
Time Tested	07:15	09:30	
Test Request #/Location	Lot-36	Lot-43	
Easting	3509.6	3565.6	
Northing	7127.2	7121.9	
Elevation (m)	5.85	9.54	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Gravel/Clay Brown/Grey	Gravel/Clay Brown/Grey	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	44.8	45.2	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.11	2.08	
Field Moisture Content %	12.4	13.5	
Field Dry Density t/m^3	1.87	1.84	
Maximum Dry Density t/m^3	1.95	1.88	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	11.0	14.0	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-1.5	0.5	
Moisture Ratio %	111.5	96.0	
Density Ratio %	**96.0**	**98.0**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-38**
Issue Number: 1
Date Issued: 09/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 242
Date Sampled: 05/11/2021
Dates Tested: 05/11/2021 - 06/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 98% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Material Source: Onsite

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Brisbane Laboratory - Branch
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Approved Signatory: James Gill
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-57	30021-58	
Date Tested	05/11/2021	05/11/2021	
Time Tested	08:00	08:25	
Test Request #/Location	Roadway	Roadway	
Easting	3556.5	3543.7	
Northing	7093.7	7111.4	
Elevation (m)	9.21	8.25	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Gravel/Clay	Gravel/Clay	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	27.0	27.5	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m^3	2.13	2.14	
Field Moisture Content %	10.5	12.4	
Field Dry Density t/m^3	1.93	1.91	
Maximum Dry Density t/m^3	1.95	1.94	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	9.5	11.5	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	-1.0	-1.0	
Moisture Ratio %	109.0	107.0	
Density Ratio %	**98.5**	**98.5**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-40**
Issue Number: 1
Date Issued: 23/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 256
Date Sampled: 19/11/2021
Dates Tested: 19/11/2021 - 20/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Various Locations
Material: Fill
Material Source: Onsite

Australian Geotechnical Testing
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Brisbane Laboratory - Branch
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WORLD RECOGNISED ACCREDITATION

Approved Signatory: Sothea Bun
Laboratory Manager
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-67	30021-68	
Date Tested	19/11/2021	19/11/2021	
Time Tested	09:45	11:30	
Test Request #/Location	Master Lot 1003	Foot Path Adjacent to Lot 1003	
Easting	3115.85	3135.96	
Northing	7081.42	7073.86	
Elevation (m)	5.35	5.05	
Layer / Reduced Level	Fill	Fill	
Thickness of Layer (mm)	200	200	
Soil Description	Sandy Clay brown	Sandy Clay brown	
Test Depth (mm)	175	175	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	0	0	
Oversize (dry basis) %	0	0	
Curing Hours	22.5	23.2	
Method used to Determine Plasticity	Visual/tactile	Visual/tactile	
Field Wet Density t/m^3	2.06	2.06	
Field Moisture Content %	16.5	15.4	
Field Dry Density t/m^3	1.76	1.79	
Maximum Dry Density t/m^3	1.79	1.81	
Adjusted Maximum Dry Density t/m^3	**	**	
Optimum Moisture Content %	18.5	17.5	
Adjusted Optimum Moisture Content %	**	**	
Moisture Variation %	2.0	2.0	
Moisture Ratio %	89.5	89.0	
Density Ratio %	**98.5**	**99.0**	
Compaction Method	**Standard**	**Standard**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Report Number: **AGT30021-41**
Issue Number: 1
Date Issued: 30/11/2021
Client: Pacific Geotech

Project Number: AGT30021
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads QLD 4220
Contractor: CCA Winslow
Client Reference: PG-3614
Work Request: 254
Dates Tested: 20/11/2021 - 22/11/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction
Site Selection: AS 1289.1.4.1
Location: Cowell Drive, Burleigh Heads QLD 4220
Lot Number: Various House Lots
Material: Clay fill
Material Source: Import

Australian Geotechnical Testing
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Brisbane Laboratory - Branch
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Phone: 1300 026 583
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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Sothea Bun
Laboratory Manager - Brisbane
NATA Accredited Laboratory Number: 20245

Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1			
Sample Number	30021-64	30021-65	30021-66
Date Tested	20/11/2021	20/11/2021	20/11/2021
Time Tested	08:30	08:40	08:50
Test Request #/Location	Lot-1003	Lot-1003	Lot-1003
Easting	3160.16	3152.87	3184.26
Northing	7015.82	7047.76	7055.62
Elevation (m)	5.73	5.39	5.20
Layer / Reduced Level	Fill	Fill	Fill
Thickness of Layer (mm)	200	200	200
Soil Description	Clay Fill (Brown)	Clay Fill (Brown)	Clay Fill (Brown)
Test Depth (mm)	175	175	175
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	0	0	0
Oversize (dry basis) %	0	0	0
Curing Hours	49.5	49.8	50.2
Method used to Determine Plasticity	**	**	**
Field Wet Density t/m^3	2.12	2.08	2.10
Field Moisture Content %	12.1	14.1	15.0
Field Dry Density t/m^3	1.89	1.82	1.82
Maximum Dry Density t/m^3	1.96	1.85	1.87
Adjusted Maximum Dry Density t/m^3	**	**	**
Optimum Moisture Content %	13.0	14.5	13.5
Adjusted Optimum Moisture Content %	**	**	**
Moisture Variation %	1.0	0.5	-1.5
Moisture Ratio %	93.0	97.5	112.0
Density Ratio %	**96.5**	**98.5**	**97.5**
Compaction Method	**Standard**	**Standard**	**Standard**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

Pacific Geotech
Consulting Geotechnical Engineers

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Gold Coast Laboratory

Report Number: **PG-3614-A-1**
Issue Number: 1
Date Issued: 24/06/2022
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 152
Date Sampled: 14/06/2022 9:30
Dates Tested: 16/06/2022 - 16/06/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by Client
Location: Cowell Drive, Burleigh Heads
Material: Clayey Sand w/ Gravel
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-152A	22-152B	
Client Sample #	**	**	
Date Tested	14/06/2022	14/06/2022	
Time Tested	09:30	09:35	
Test Request #/Location	Fill Area	Fill Area	
Easting	542407	542393	
Northing	6889654	6889655	
Elevation (m)	5.1	5.1	
Layer / Reduced Level	N/A	N/A	
Soil Description	Clayey Sand w/ Gravel	Clayey Sand w/ Gravel	
Test Depth (mm)	300	300	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	2	3	
Field Wet Density (FWD) t/m^3	2.20	2.25	
Field Moisture Content %	8.4	10.3	
Field Dry Density (FDD) t/m^3	2.03	2.04	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.23	2.23	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	0.0	
Hilf Density Ratio (%)	**98.5**	**101.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

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ISO 9001 Quality Management Systems CERTIFIED
Gold Coast Laboratory

Report Number: **PG-3614-A-2**
Issue Number: 1
Date Issued: 05/07/2022
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 159
Date Sampled: 20/06/2022 9:00
Dates Tested: 21/06/2022 - 30/06/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Modified Compaction
Location: Cowell Drive, Burleigh Heads
Material: Clayey Sand w/ Gravel
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-159A	22-159B	22-159C
Client Sample #	**	**	**
Date Tested	20/06/2022	20/06/2022	20/06/2022
Time Tested	09:00	09:05	09:10
Test Request #/Location	Fill Area	Fill Area	Fill Area
Easting	542402	542346	542328
Northing	6889651	6889637	6889645
Elevation (m)	5.44	5.44	5.44
Soil Description	Clayey Sand w/ Gravel	Clayey Sand w/ Gravel	Clayey Sand w/ Gravel
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	3	4	4
Field Wet Density (FWD) t/m^3	2.23	2.23	2.16
Field Moisture Content %	11.9	6.3	6.8
Field Dry Density (FDD) t/m^3	1.99	2.10	2.02
Peak Converted Wet Density t/m^3	**	**	**
Adjusted Peak Converted Wet Density t/m^3	2.22	2.26	2.24
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	-0.5	2.0	2.0
Hilf Density Ratio (%)	**100.5**	**99.0**	**96.0**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Material Test Report

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Report Number: **PG-3614-A-3**
Issue Number: 1
Date Issued: 10/11/2022
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 376
Date Sampled: 07/11/2022
Dates Tested: 07/11/2022 - 08/11/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: General Fill
Material Source: Onsite

Ian Masman (Principal Geotechnician)

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	G22-376A	G22-376B	G22-376C	G22-376D	G22-376E
Client Sample #	**	**	**	**	**
Date Tested	07/11/2022	07/11/2022	07/11/2022	07/11/2022	07/11/2022
Time Tested	08:10	08:20	08:24	08:35	08:40
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	542506	542515	542536	542509	542485
Northing	6889716	6889693	6889655	6889611	6889627
Layer / Reduced Level	Finish Level	0.5m Below Finish Level	Finish Level	Finish Level	Finish Level
Soil Description	Sandy Clay. Orange	Sandy Clay w/ Gravel. Brown	Sandy Clay w/ Gravel. Brown	Sandy Clay w/ Gravel. Pale Brown	Sandy Clay w/ Gravel. Orange
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	12	13	8	8
Field Wet Density (FWD) t/m^3	1.88	1.99	2.15	2.23	2.17
Field Moisture Content %	15.6	13.0	7.7	9.5	9.8
Field Dry Density (FDD) t/m^3	1.63	1.76	2.00	2.04	1.98
Peak Converted Wet Density t/m^3	2.03	**	**	**	**
Adjusted Peak Converted Wet Density t/m^3	**	2.10	2.20	2.20	2.13
Moisture Variation (Wv) %	0.5	**	**	**	**
Adjusted Moisture Variation %	**	0.0	0.5	0.0	1.5
Hilf Density Ratio (%)	**92.5**	**94.5**	**98.0**	**101.5**	**101.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

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Report Number: **PG-3614-A-3**
Issue Number: 1
Date Issued: 10/11/2022
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 376
Date Sampled: 07/11/2022
Dates Tested: 07/11/2022 - 08/11/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: General Fill
Material Source: Onsite

Ian Masman (Principal Geotechnician)

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	G22-376F	G22-376G	G22-376H	G22-376I	G22-376J
Client Sample #	**	**	**	**	**
Date Tested	07/11/2022	07/11/2022	07/11/2022	07/11/2022	07/11/2022
Time Tested	08:50	09:05	09:15	09:20	09:35
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	542471	542401	542342	542350	542276
Northing	6889684	6889610	6889636	6889671	6889629
Layer / Reduced Level	0.5m Below Finish Level	0.5m Below Finish Level	Finish Level	Finish Level	Finish Level
Soil Description	Sandy Gravelly Clay. Brown	Sandy Clay w/ Gravel. Pale Brown	Sandy Clay w/ Gravel. Brown	Sandy Clay w/ Gravel. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	19	5	7	3	12
Field Wet Density (FWD) t/m^3	2.19	1.99	2.10	1.84	2.19
Field Moisture Content %	9.8	14.6	11.6	14.3	8.4
Field Dry Density (FDD) t/m^3	2.00	1.74	1.88	1.61	2.02
Peak Converted Wet Density t/m^3	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m^3	2.24	2.10	2.15	2.04	2.10
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	1.0	0.0	0.0	0.0	2.5
Hilf Density Ratio (%)	**97.5**	**95.0**	**97.5**	**90.0**	**104.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**

Moisture Variation Note:
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Negative values = test is wet of OMC

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Rob Sharpe (pg-robs)

Report Number: **PG-3614-A-4**
Issue Number: 1
Date Issued: 03/01/2023
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 459
Date Sampled: 21/12/2022
Dates Tested: 21/12/2022 - 21/12/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: General Fill
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	G22-459A	G22-459B	
Client Sample #	**	**	
Date Tested	21/12/2022	21/12/2022	
Time Tested	09:15	09:25	
Test Request #/Location	Wetlands Access Track	Wetlands Access Track	
Easting	542856	542792	
Northing	6889911	6889917	
Layer / Reduced Level	Finish Level	Finish Level	
Soil Description	Sandy Clay w/ Gravel. Brown	Sandy Clay w/ Gravel. Brown	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	7	8	
Field Wet Density (FWD) t/m^3	2.11	2.12	
Field Moisture Content %	6.7	6.6	
Field Dry Density (FDD) t/m^3	1.98	1.99	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.15	2.18	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.5	2.0	
Hilf Density Ratio (%)	**98.0**	**97.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
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Material Test Report

Report Number: **PG-3614-A-5**
Issue Number: 1
Date Issued: 22/02/2023
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 519
Date Sampled: 15/02/2023
Dates Tested: 16/02/2023 - 16/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: General Fill
Material Source: Onsite

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Dave Trotman (Senior Geotechnician)

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	G23-519A	G23-519B	G23-519C	G23-519D
Client Sample #	**	**	**	**
Date Tested	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Time Tested	13:05	13:10	14:40	14:55
Test Request #/Location	Lot 1004	Lot 1004	Lot 1004	Lot 1004
Easting	542515	542506	542519	542507
Northing	6889693	6889715	6889691	6889711
Layer / Reduced Level	0.5m Below FL	0.5m Below FL	FL	FL
Soil Description	Sandy Clay w/ Gravel. Brown	Sandy Clay. Orange	Sandy Clay. Brown	Sandy Clay. Orange
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	10	0	0	0
Field Wet Density (FWD) t/m^3	2.18	1.95	2.03	2.05
Field Moisture Content %	9.4	15.8	16.9	14.9
Field Dry Density (FDD) t/m^3	1.99	1.69	1.74	1.78
Peak Converted Wet Density t/m^3	**	2.01	2.06	2.06
Adjusted Peak Converted Wet Density t/m^3	2.11	**	**	**
Moisture Variation (Wv) %	**	0.0	0.0	0.0
Adjusted Moisture Variation %	2.0	**	**	**
Hilf Density Ratio (%)	**103.0**	**97.5**	**98.5**	**99.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**

Moisture Variation Note:
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Negative values = test is wet of OMC

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Dave Trotman (Senior Geotechnician)

Report Number: **PG-3614-A-6**
Issue Number: 1
Date Issued: 22/02/2023
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 522
Date Sampled: 17/02/2023
Dates Tested: 17/02/2023 - 20/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: Retaining Wall Backfill
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	G23-522A		
Client Sample #	**		
Date Tested	17/02/2023		
Time Tested	12:45		
Test Request #/Location	Lot 19		
Chainage (m)	O/S Rear Right Corner		
Location Offset (m)	5m Front, 3m Left		
Layer / Reduced Level	1.6m Below FL		
Soil Description	Sandy Clay w/ Gravel. Brown		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	7		
Field Wet Density (FWD) t/m^3	2.12		
Field Moisture Content %	12.1		
Field Dry Density (FDD) t/m^3	1.89		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.20		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	-0.5		
Hilf Density Ratio (%)	**96.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
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Negative values = test is wet of OMC

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Report Number: **PG-3614-A-7**
Issue Number: 1
Date Issued: 22/02/2023
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 525
Date Sampled: 20/02/2023
Dates Tested: 20/02/2023 - 21/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: Retaining Wall Backfill
Material Source: Imported

Dave Trotman (Senior Geotechnician)

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	G23-525A		
Client Sample #	**		
Date Tested	20/02/2023		
Time Tested	14:20		
Test Request #/Location	Lot 19		
Chainage (m)	O/S Rear Right Corner		
Location Offset (m)	22m Front, 1.5m Left		
Layer / Reduced Level	0.8m Below FL		
Soil Description	Sandy Clay w/ Gravel. Brown		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	5		
Field Wet Density (FWD) t/m^3	2.10		
Field Moisture Content %	9.5		
Field Dry Density (FDD) t/m^3	1.92		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.13		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	**98.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
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Negative values = test is wet of OMC

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Report Number: **PG-3614-A-8**
Issue Number: 1
Date Issued: 22/02/2023
Client: CCA Winslow

Project Number: PG-3614-A
Project Name: Proposed Residential Development
Project Location: Cowell Drive, Burleigh Heads
Work Request: 527
Date Sampled: 22/02/2023
Dates Tested: 22/02/2023 - 22/02/2023
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Compaction
Site Selection: Selected by GTA
Location: Burleigh Heads
Material: Retaining Wall Backfill
Material Source: Imported

Dave Trotman (Senior Geotechnician)

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	G23-527A		
Client Sample #	**		
Date Tested	22/02/2023		
Time Tested	06:45		
Test Request #/Location	Lot 19		
Chainage (m)	O/S Rear Right Corner		
Location Offset (m)	15m Front, 1.5m Left		
Layer / Reduced Level	Finish Level		
Soil Description	Sandy Clay w/ Gravel. Brown		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	6		
Field Wet Density (FWD) t/m^3	2.07		
Field Moisture Content %	12.0		
Field Dry Density (FDD) t/m^3	1.85		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.15		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	**96.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
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Negative values = test is wet of OMC

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