



EARTHWORKS CERTIFICATION  
LEVEL 1 INSPECTION & TESTING PROGRAM

Courtney Drive  
Upper Coomera  
CCA Winslow

June 2024

PG-4116-A

E: [info@pacgeo.com.au](mailto:info@pacgeo.com.au)

[www.pacgeo.com.au](http://www.pacgeo.com.au)

ABN: 62 615 248 952

Ref: PG-4116-A, 2024-05-09, LVR VER 1 (Stage 1)  
Author: Ben Elsmore

21<sup>st</sup> June, 2024

CCA Winslow

Email: [michael.williams@winslow.com.au](mailto:michael.williams@winslow.com.au)

CC: [michaelj@winslow.com.au](mailto:michaelj@winslow.com.au); [aaron.fysh@winslow.com.au](mailto:aaron.fysh@winslow.com.au)

**ATTN: MICHAEL WILLIAMS**

Dear Sir,

**EARTHWORKS CERTIFICATION - LEVEL 1 INSPECTION & TESTING PROGRAM –  
PROPOSED RESIDENTIAL DEVELOPMENT – STAGE 1 - COURTNEY DRIVE,  
UPPER COOMERA**

**1.0 INTRODUCTION**

This report summarises the results of the Level 1 Geotechnical Inspection and Testing program carried out by Pacific Geotech Pty Ltd at the above site between October 2023 and February 2024 during the bulk earthworks program.

The scope of the geotechnical services provided comprised the following:

- Assessment of the stripped surface prior to filling.
- General removal of organics and deleterious materials from the stripped surface and transported fill material. It should be noted that under the instructions of the Client, Pacific Geotech was prevented from stick picking while machines were in operation. As a result, a small volume of organic material is present within the lower layers of the fill material.
- Assessment and associated supervision of the removal of unsuitable material.
- Supervision and associated nuclear densometer testing of the placed fill material.

The fill material comprised initially of a sandy clay and gravelly clay fill material won for the upslope cut areas of the development site. As the cuts progressed, stronger less weathered and less fractured rock was encountered which initially broke down to a sandy gravelly clay and clayey sandy gravel with some cobbles and small boulders throughout. As these cuts progressed, the volume of boulders within the fill material increased and the volume of fines decreased. Whilst some effort was made to either break down or remove the over-sized particles from the fill mass, some over-sized particles are present within the material. This is reflected in the test reports where samples of the coarse fill material did not conform to the requirements of the test specification AS 1289 5.1.1 and were generally reworked.



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Supervision was generally carried out by Lyle Slater, Dave Trotman and Ian Masman 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**

<b>Location</b>	<b>Minimum Dry Density Ratio (%)</b>	<b>Moisture Specification</b>
General Development Area	95	±2% of OMC
Behind Retaining Walls	95	±2% of OMC
Note: The recommended compaction is a percentage of the Maximum Dry Density determined by Australian Standard 1289 5.1.1 (Standard Compaction).		

### **2.1 Compaction Methodology**

Compaction was generally carried out using the combination of a 12 tonne to 15 tonne, vibratory pad foot roller and a Cat 815 compactor.

Initially, general fill layers of approximately 300mm to 400mm (loose) layer thickness were placed. As the material became coarser and more difficult to break down, the fill layers were initially reduced to 150mm to 200mm loose layer thickness in order to more readily identify and remove or otherwise breakdown the over-sized rock particles. The fill layers then increased back to 300mm to 400mm resulting in an increase in oversize material within the fill mass. This is not to say the soil profile is not fit for purpose, just that some oversize material is present within the fill.

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

### **2.2 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 74 tests were undertaken during the backfill works within these Lots (including retests).

Typically, due to the coarse nature of the fill material, 'B' moulds were used to undertake the laboratory compaction tests in accordance with AS 1289.

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.

It should be carefully noted that several density tests could not be tested in accordance with the laboratory test method due to the collected samples having greater than 20% of the mass of particles retained on the 37.5mm sieve. These areas were generally reworked until suitable testing using 'B' moulds could be undertaken.

Where failures were recorded, retests were generally taken where appropriate tests could be taken in the recompacted material.

The reports are identified by the following report numbers. It should be noted that the attached test reports contain test results from Stages 2 and 3 as well as stage 1. This is due to the bulk earthworks for Stages 1, 2 and 3 being carried out concurrently.

**TABLE 2 TEST REPORT SUMMARY**

Report Number	Sample Number	Location	Date of Test	Dry Density Ratio (%)	Moisture Ratio (%) <sup>(1)</sup>
PG-4116-A-1	G23-972A	527553m E, 6917149m N	20/10/2023	97.0	0.0
	G23-972B	527547m E, 6917150m N	20/10/2023	98.0	0.0
PG-4116-A-2	G23-977A	527553m E, 6917153m N	23/10/2023	89.5*	3.0
	G23-977B	527546m E, 6917143m N	23/10/2023	96.5	0.5
PG-4116-A-3	G23-978A	527554m E, 6917153m N	24/10/2023	98.5	2.0
	G23-978B	527546m E, 6917138m N	24/10/2023	95.0	0.0
	G23-978C	527533m E, 6917136m N	24/10/2023	95.0	0.5
PG-4116-A-4	G23-981A	527504m E, 6917166m N	25/10/2023	97.5	-0.5
	G23-981B	527524m E, 6917166m N	25/10/2023	96.5	0.0
	G23-981C	527517m E, 6917151m N	25/10/2023	96.5	-0.5
	G23-981D	527558m E, 6917157m N	25/10/2023	96.5	2.5
	G23-981-F +	527553m E, 6917153m N	25/10/2023	97.5	2.5
PG-4116-A-5	G23-988-E	527503m E, 6917163m N	26/10/2023	100.0	1.5
	G23-988-F	527511m E, 6917146m N	26/10/2023	100.0	2.0
	G23-988-G	527522m E, 6917149m N	26/10/2023	93.0*	1.5
	G23-988-H	527531m E, 6917106m N	26/10/2023	96.5	2.0
PG-4116-A-6	G23-991-D	527568m E, 6917170m N	27/10/2023	99.5	3.0
	G23-991-E	527503m E, 6917161m N	27/10/2023	97.0	0.0
	G23-991-F	527510m E, 6917123m N	27/10/2023	97.0	2.5
	G23-991-G	527518m E, 6917096m N	27/10/2023	95.5	2.5
PG-4116-A-8	G23-994-A	527508m E, 6917096m N	31/10/2023	91.0*	0.0
	G23-994-B	527499m E, 6917103m N	31/10/2023	102.0	2.5
	G23-994-C	527503m E, 6917119m N	31/10/2023	101.0	2.5
	G23-994-D	527492m E, 6917128m N	31/10/2023	97.0	2.5
	G23-994-E	527495m E, 6917144m N	31/10/2023	96.0	3.0
PG-4116-A-9	G23-1001-A	527497m E, 6917131m N	2/11/2023	103.5	1.5
	G23-1001-B	527502m E, 6917101m N	2/11/2023	97.0	0.0
	G23-1001-C	527486m E, 6917118m N	2/11/2023	96.0	0.0
	G23-1001-D	527483m E, 6917130m N	2/11/2023	92.5*	0.0
PG-4116-A-10	G23-1009-E	527496m E, 6917074m N	3/11/2023	93.5*	0.0
	G23-1009-F	527477m E, 6917133m N	3/11/2023	91.5	2.0
PG-4116-A-14	G23-1026E	527476m E, 6917132m N	9/11/2023	93.0*	2.0

Report Number	Sample Number	Location	Date of Test	Dry Density Ratio (%)	Moisture Ratio (%) <sup>(1)</sup>
	G23-1026F	527483m E, 6917104m N	9/11/2023	95.0	0.0
	G23-1026H +	527522m E, 6917149m N	9/11/2023	96.0	0.5
PG-4116-A-15	G23-1029F +	527508m E, 6917096m N	10/11/2023	96.0	1.5
PG-4116-A-17	G23-1042F +	527496m E, 6917074m N	15/11/2024	99.0	1.5
	G23-1042G +	527477m E, 6917133m N	15/11/2024	101.5	1.0
PG-4116-A-18	G23-1037E +	527463m E, 6917130m N	14/11/2023	96.0	0.5
PG-4116-A-19	G23-1074J +	527476m E, 6917132m N	16/11/2023	96.5	0.5
PG-4116-A-21	G23-1059F	527391m E, 6917904m N	20/11/2023	97.5	0.5
PG-4116-A-22	G23-1055H	527391mE, 6916902m N	17/11/2023	97.0	0.5
	G23-1055I	527407m E, 6916915m N	17/11/2023	99.5	0.0
PG-4116-A-24	G23-1071A	527414m E, 6916906m N	27/11/2023	95.5	-0.5
	G23-1071B	527401m E, 6916920m N	27/11/2023	96.5	0.5
PG-4116-A-25	G23-1068A	527420m E, 6916904m N	24/11/2023	97.5	0.0
	G23-1068B	527420m E, 6916907m N	24/11/2023	100.0	0.0
	G23-1068C	527414m E, 6916906m N	24/11/2023	97.0	0.5
PG-4116-A-26	G23-1074A	527402m E, 6916897m N	28/11/2023	101.5	0.0
	G23-1074B	527416m E, 6916912m N	28/11/2023	100.5	-0.5
PG-4116-A-27	G23-1088-D	527413m E, 6916907m N	1/12/2023	98.0	-0.5
	G23-1088-E	527410m E, 6916919m N	1/12/2023	98.5	0.0
PG-4116-A-30	G23-1107A	527417m E, 6916902m N	6/12/2023	99.5	1.5
	G23-1107B	527416m E, 6916892m N	6/12/2023	96.0	-0.5
	G23-1107C	527427m E, 6916899m N	6/12/2023	96.0	0.0
	G23-1107D	527427m E, 6916892m N	6/12/2023	97.5	0.0
PG-4116-A-37	G23-1166D	527416m E, 6916888m N	20/12/2023	#	#
	G23-1166-E	527394m E, 6916918m N	20/12/2023	95.0	0.5
PG-4116-A-38	G24-1177-F	527420m E, 6916882m N	15/01/2024	#	#
	G24-1177-G	527407m E, 6916914m N	15/01/2024	#	#
PG-4116-A-39	G24-1182B	527404m E, 6916913m N	23/01/2024	#	#
PG-4116-A-40	G24-1187A	527418m E, 6916880m N	24/01/2024	#	#
	G24-1187B	527404m E, 6916905m N	24/01/2024	#	#
	G24-1187C	527457m E, 6916864m N	24/01/2024	#	#
	G24-1187D	527439m E, 6916869m N	24/01/2024	#	#
PG-4116-A-41	G24-1190A	527405m E, 6916891m N	25/01/2024	98.0	0.5
	G24-1190B	527422m E, 6916876m N	25/01/2024	98.0	1.0
	G24-1190C	527444m E, 6916934m N	25/01/2024	98.0	0.0
	G24-1190D	527390m E, 6916923m N	25/01/2024	95.0	0.5
PG-4116-A-44	G24-1205A	527405m E, 6916907m N	6/02/2024	96.0	0.5
	G24-1205B	527413m E, 6916910m N	6/02/2024	95.5	1.0
	G24-1205C	527397m E, 6916921m N	6/02/2024	97.0	-1.0
	G24-1205D	527389m E, 6916936m N	6/02/2024	95.0	-1.5
	G24-1205E	527407m E, 6916941m N	6/02/2024	97.0	-1.0
	G24-1205F	527443m E, 6916943m N	6/02/2024	97.5	0.5

**Notes:**

\* - Denotes a failed test. Retest taken.

+ - Denotes a retest from a failed test result.

# - Sample not testable due to more than 20% of material being retained on the 37.5mm sieve.

(1) Positive values are dry of OMC, negative values are wet of OMC

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.

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### **3.0 GENERAL STATEMENT OF COMPLIANCE**

Pacific Geotech Pty Ltd certify that the bulk earthworks at the site has been carried out in in general accordance with the project specification, under a Level 1 Inspection And Testing Program in accordance with AS 3798-2007 guidelines.

It must be noted that several tested areas, particularly in the lower fill layers which were placed during an extended dry weather period are outside (dry) of the moisture specification. Additionally, as the weathered rock in the cut areas became stronger, less weathered and less fractured, the particle size within the fill material increased and included some particles which exceed the maximum allowable particle size being two-thirds of the layer thickness in size. Whilst the dry material and the over-sized particles do not conform the project specifications, based on our ongoing assessments during the earthworks operation, these issues are not expected to impact the long-term performance of the fill material and the fill is therefore assessed to be fit for purpose.

The fill may be deemed 'Controlled' fill in general 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)**



**P. ELKINGTON (RPEQ 7226)**

For and on behalf of  
**PACIFIC GEOTECH PTY LTD**

Attached:      Dry Density Ratio Reports  
                     Site Photographs



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## SITE PHOTOGRAPHS



**Stripping of a former dam to expose the natural soils prior to filling.**



**Compaction of the lower fill layers using the Cat 815 compactor.**





**Progress photograph – 25<sup>th</sup> October 2023**



**Progress photograph – 1<sup>st</sup> November 2023.**





**Progress photograph (southern portion of Stage 1) – 11<sup>th</sup> December 2023.**



**The Rangeview Road Extension area.**





**The Stage 1 fill area near the finished surface level.**

# Material Test Report

**Report Number:** PG-4116-A-1  
**Issue Number:** 1  
**Date Issued:** 25/10/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 972  
**Date Sampled:** 20/10/2023 1:00  
**Dates Tested:** 20/10/2023 - 23/10/2023  
**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:** Upper Coomera  
**Material:** Sandy Clay, brown  
**Material Source:** Onsite

Pacific Geotech Pty Ltd  
 ABN: 62 615 248 952  
 Gold Coast Laboratory  
 3 Jowett St Coomera QLD 4209  
 Phone: (07) 5636 4680  
 Email: info@pacgeo.com.au



Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-972A	G23-972B	
Sample Number	G23-972A	G23-972B	
Client Sample #	**	**	
Date Tested	20/10/2023	20/10/2023	
Time Tested	01:00	01:05	
Test Request #/Location	Stage 1	Stage 1	
Easting	527553	527547	
Northing	6917149	6917150	
Elevation (m)	41.83	42.75	
Thickness of Layer (mm)	175	175	
Soil Description	Sandy Clay	Sandy Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	6	6	
Field Wet Density (FWD) t/m <sup>3</sup>	1.94	1.99	
Field Moisture Content %	17.3	18.7	
Field Dry Density (FDD) t/m <sup>3</sup>	1.66	1.68	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.00	2.03	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	0.0	0.0	
Hilf Density Ratio (%)	<b>97.0</b>	<b>98.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-2  
**Issue Number:** 1  
**Date Issued:** 27/10/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 977  
**Date Sampled:** 23/10/2023  
**Dates Tested:** 23/10/2023 - 24/10/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-977A	G23-977B	
Sample Number	G23-977A	G23-977B	
Client Sample #	**	**	
Date Tested	23/10/2023	23/10/2023	
Time Tested	13:10	13:20	
Test Request #/Location	Stage 1	Stage 1	
Easting	527553	527546	
Northing	6917153	6917143	
Elevation (m)	44.8	43.8	
Thickness of Layer (mm)	175	175	
Soil Description	Sandy Clay, Brown	Sandy Clay, Brown	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	11	
Field Wet Density (FWD) t/m <sup>3</sup>	1.85	2.04	
Field Moisture Content %	8.1	9.9	
Field Dry Density (FDD) t/m <sup>3</sup>	1.71	1.86	
Peak Converted Wet Density t/m <sup>3</sup>	2.07	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	2.12	
Moisture Variation (Wv) %	3.0	**	
Adjusted Moisture Variation %	**	0.5	
Hilf Density Ratio (%)	<b>89.5</b>	<b>96.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-3  
**Issue Number:** 1  
**Date Issued:** 01/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 978  
**Date Sampled:** 24/10/2023  
**Dates Tested:** 24/10/2023 - 31/10/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Rob Sharpe

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-978A	G23-978B	G23-978C	G23-978D	G23-978E
Sample Number	**	**	**	**	**
Client Sample #	**	**	**	**	**
Date Tested	24/10/2023	24/10/2023	24/10/2023	24/10/2023	24/10/2023
Time Tested	10:05	10:10	10:15	10:30	10:35
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 2	Stage 2
Easting	527554	527546	527533	527401	527381
Northing	6917153	6917138	6917136	6917086	6917100
Elevation (m)	47.6	45.8	46.1	57.6	56.4
Soil Description	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, 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 (%)	9	20	4	4	7
Field Wet Density (FWD) t/m <sup>3</sup>	2.08	2.09	1.89	1.94	1.96
Field Moisture Content %	10.3	12.7	13.0	10.8	9.2
Field Dry Density (FDD) t/m <sup>3</sup>	1.89	1.86	1.67	1.75	1.79
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.12	2.21	1.99	2.05	2.06
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	2.0	0.0	0.5	2.5	2.5
Hilf Density Ratio (%)	<b>98.5</b>	<b>95.0</b>	<b>95.0</b>	<b>95.0</b>	<b>95.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-4  
**Issue Number:** 1  
**Date Issued:** 03/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 981  
**Date Sampled:** 25/10/2023  
**Dates Tested:** 25/10/2023 - 02/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Rob Sharpe

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-981A	G23-981B	G23-981C	G23-981D
Sample Number	G23-981A	G23-981B	G23-981C	G23-981D
Client Sample #	**	**	**	**
Date Tested	25/10/2023	25/10/2023	25/10/2023	25/10/2023
Time Tested	10:02	10:07	10:15	10:20
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527504	527524	527519	527558
Northing	6917166	6917166	6917151	6917157
Elevation (m)	49.9	48.8	48.5	46.9
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Clay w/ Gravel, Brown
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 (%)	3	6	2	3
Field Wet Density (FWD) t/m <sup>3</sup>	2.15	2.08	2.07	2.08
Field Moisture Content %	12.4	13.5	12.5	11.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.91	1.83	1.84	1.87
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.20	2.15	2.15	2.16
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	-0.5	0.0	-0.5	2.5
Hilf Density Ratio (%)	<b>97.5</b>	<b>96.5</b>	<b>96.5</b>	<b>96.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-4  
**Issue Number:** 1  
**Date Issued:** 03/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 981  
**Date Sampled:** 25/10/2023  
**Dates Tested:** 25/10/2023 - 02/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Rob Sharpe

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-981E	G23-981F	G23-981G	
Sample Number	G23-981E	G23-981F	G23-981G	
Client Sample #	**	**	**	
Date Tested	25/10/2023	25/10/2023	25/10/2023	
Time Tested	10:25	10:35	10:50	
Test Request #/Location	Stage 1	Stage 1 (Retest G23-977A)	Stage 2	
Easting	527537	527553	527347	
Northing	6917140	6917153	6917157	
Elevation (m)	46.0	44.8	45.8	
Soil Description	Sandy Gravelly Clay, Brown	Sandy Clay w/ Gravel, Brown	Sandy Gravelly Clay, Orange	
Test Depth (mm)	150	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	6	5	5	
Field Wet Density (FWD) t/m <sup>3</sup>	2.01	2.11	1.96	
Field Moisture Content %	13.2	11.3	9.1	
Field Dry Density (FDD) t/m <sup>3</sup>	1.78	1.89	1.80	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.11	2.16	2.05	
Moisture Variation (Wv) %	**	**	**	
Adjusted Moisture Variation %	0.0	2.5	2.0	
Hilf Density Ratio (%)	<b>95.5</b>	<b>97.5</b>	<b>95.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-5  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 988  
**Date Sampled:** 26/10/2023  
**Dates Tested:** 26/10/2023 - 02/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-988A	G23-988B	G23-988C	G23-988D
Sample Number	G23-988A	G23-988B	G23-988C	G23-988D
Client Sample #	**	**	**	**
Date Tested	26/10/2023	26/10/2023	26/10/2023	26/10/2023
Time Tested	10:10	10:15	10:22	10:29
Test Request #/Location	Stage 2	Stage 2	Stage 2	Stage 2
Easting	527353	527351	527382	527382
Northing	6917164	6917138	6917109	6917089
Elevation (m)	46.3	49.2	53.9	58.2
Soil Description	Sandy Clay w/ Gravel, Orange	Sandy Clay w/ Gravel, Orange	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown
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 (%)	7	18	8	17
Field Wet Density (FWD) t/m <sup>3</sup>	2.05	2.04	2.20	2.14
Field Moisture Content %	8.1	9.1	10.3	9.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.90	1.87	1.99	1.95
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.07	2.19	2.15	2.18
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	5.0	2.0	1.0	1.5
Hilf Density Ratio (%)	<b>99.0</b>	<b>93.0</b>	<b>102.0</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-5  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 988  
**Date Sampled:** 26/10/2023  
**Dates Tested:** 26/10/2023 - 02/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-988E	G23-988F	G23-988G	G23-988H
Sample Number	G23-988E	G23-988F	G23-988G	G23-988H
Client Sample #	**	**	**	**
Date Tested	26/10/2023	26/10/2023	26/10/2023	26/10/2023
Time Tested	10:42	10:47	10:55	11:02
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527503	527511	527522	527531
Northing	6917163	6917146	6917149	6917106
Elevation (m)	51.0	49.9	49.5	47.7
Soil Description	Sandy Clay w/ Gravel, Orange	Sandy Clay w/ Gravel, Orange	Sandy Clay w/ Gravel, Orange	Sandy Clay w/ Gravel, 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 (%)	7	10	10	11
Field Wet Density (FWD) t/m <sup>3</sup>	2.18	2.18	2.01	2.11
Field Moisture Content %	9.2	9.2	9.7	9.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.99	2.00	1.83	1.93
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.17	2.19	2.16	2.19
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	1.5	2.0	1.5	2.0
Hilf Density Ratio (%)	<b>100.0</b>	<b>100.0</b>	<b>93.0</b>	<b>96.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-6  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 991  
**Date Sampled:** 27/10/2023  
**Dates Tested:** 27/10/2023 - 01/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-991A	G23-991B	G23-991C	G23-991D
Sample Number	G23-991A	G23-991B	G23-991C	G23-991D
Client Sample #	**	**	**	**
Date Tested	27/10/2023	27/10/2023	27/10/2023	27/10/2023
Time Tested	10:05	10:10	10:20	10:30
Test Request #/Location	Stage 2	Stage 2	Stage 2	Stage 1
Easting	527347	527369	527320	527568
Northing	6917165	6917141	6917212	6917170
Elevation (m)	47.2	49.9	42.3	48.4
Soil Description	Sandy Gravelly Clay, Orange	Sandy Gravelly Clay, Orange	Sandy Gravelly Clay, Orange	Sandy Gravelly 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 (%)	12	19	6	4
Field Wet Density (FWD) t/m <sup>3</sup>	2.09	2.20	2.09	2.15
Field Moisture Content %	5.8	10.0	5.0	6.7
Field Dry Density (FDD) t/m <sup>3</sup>	1.98	2.00	1.99	2.02
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.09	2.26	2.10	2.17
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	5.0	0.5	5.0	3.0
Hilf Density Ratio (%)	<b>100.0</b>	<b>97.5</b>	<b>99.5</b>	<b>99.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-6  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 991  
**Date Sampled:** 27/10/2023  
**Dates Tested:** 27/10/2023 - 01/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-991E	G23-991F	G23-991G	
Sample Number	G23-991E	G23-991F	G23-991G	
Client Sample #	**	**	**	
Date Tested	27/10/2023	27/10/2023	27/10/2023	
Time Tested	10:35	10:40	10:45	
Test Request #/Location	Stage 1	Stage 1	Stage 1	
Easting	527503	527510	527518	
Northing	6917161	6917123	6917096	
Elevation (m)	51.7	51.0	51.9	
Soil Description	Sandy Gravelly Clay, Orange	Sandy Gravelly Clay, Orange	Sandy Gravelly Clay, Orange	
Test Depth (mm)	150	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	15	16	7	
Field Wet Density (FWD) t/m <sup>3</sup>	2.16	2.09	2.05	
Field Moisture Content %	11.6	8.1	10.3	
Field Dry Density (FDD) t/m <sup>3</sup>	1.94	1.94	1.86	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.23	2.16	2.14	
Moisture Variation (Wv) %	**	**	**	
Adjusted Moisture Variation %	0.0	2.5	2.5	
Hilf Density Ratio (%)	<b>97.0</b>	<b>97.0</b>	<b>95.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-8  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 994  
**Date Sampled:** 31/10/2023  
**Dates Tested:** 31/10/2023 - 08/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-994A	G23-994B	G23-994C	G23-994D	G23-994E
Sample Number	G23-994A	G23-994B	G23-994C	G23-994D	G23-994E
Client Sample #	**	**	**	**	**
Date Tested	31/10/2023	31/10/2023	31/10/2023	31/10/2023	31/10/2023
Time Tested	10:05	10:10	10:20	10:25	10:35
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527508	527499	527503	527492	527495
Northing	6917096	6917103	6917119	6917128	6917144
Elevation (m)	54.0	54.8	54.1	54.7	54.1
Soil Description	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay
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 (%)	15	19	18	9	19
Field Wet Density (FWD) t/m <sup>3</sup>	2.00	2.19	2.18	2.07	2.06
Field Moisture Content %	11.1	6.3	6.7	2.4	6.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.80	2.06	2.04	2.02	1.93
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.20	2.15	2.15	2.12	2.14
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	0.0	2.5	2.5	2.5	3.0
Hilf Density Ratio (%)	<b>91.0</b>	<b>102.0</b>	<b>101.0</b>	<b>97.0</b>	<b>96.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-8  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 994  
**Date Sampled:** 31/10/2023  
**Dates Tested:** 31/10/2023 - 08/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-994F	G23-994G	G23-994H	G23-994I	
Sample Number	G23-994F	G23-994G	G23-994H	G23-994I	
Client Sample #	**	**	**	**	
Date Tested	31/10/2023	31/10/2023	31/10/2023	31/10/2023	
Time Tested	13:15	13:25	13:30	13:35	
Test Request #/Location	Stage 2	Stage 2	Stage 2	Stage 2	
Easting	527286	527276	527296	527284	
Northing	6917123	6917077	6917142	6917157	
Elevation (m)	46.0	47.8	45.0	44.4	
Soil Description	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	
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 (%)	14	18	14	13	
Field Wet Density (FWD) t/m <sup>3</sup>	2.15	2.12	2.09	1.91	
Field Moisture Content %	9.1	9.9	10.9	8.4	
Field Dry Density (FDD) t/m <sup>3</sup>	1.97	1.93	1.88	1.77	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.17	2.21	2.22	2.12	
Moisture Variation (Wv) %	**	**	**	**	
Adjusted Moisture Variation %	2.0	1.0	0.0	3.5	
Hilf Density Ratio (%)	<b>99.0</b>	<b>96.0</b>	<b>94.0</b>	<b>90.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-9  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1001  
**Date Sampled:** 02/11/2023  
**Dates Tested:** 02/11/2023 - 09/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1001A	G23-1001B	G23-1001C	G23-1001D
Sample Number	G23-1001A	G23-1001B	G23-1001C	G23-1001D
Client Sample #	**	**	**	**
Date Tested	02/11/2023	02/11/2023	02/11/2023	02/11/2023
Time Tested	10:05	10:10	10:15	10:20
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527497	527502	527486	527483
Northing	6917131	6917101	6917118	6917130
Elevation (m)	56.9	57.1	57.6	57.8
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
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 (%)	15	16	18	19
Field Wet Density (FWD) t/m <sup>3</sup>	2.26	2.16	2.15	2.08
Field Moisture Content %	9.8	11.0	10.9	11.4
Field Dry Density (FDD) t/m <sup>3</sup>	2.06	1.94	1.94	1.87
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.19	2.22	2.23	2.25
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	1.5	0.0	0.0	0.0
Hilf Density Ratio (%)	<b>103.5</b>	<b>97.0</b>	<b>96.0</b>	<b>92.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-9  
**Issue Number:** 1  
**Date Issued:** 10/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1001  
**Date Sampled:** 02/11/2023  
**Dates Tested:** 02/11/2023 - 09/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1001E	G23-1001F	G23-1001G	
Sample Number	G23-1001E	G23-1001F	G23-1001G	
Client Sample #	**	**	**	
Date Tested	02/11/2023	02/11/2023	02/11/2023	
Time Tested	10:35	10:40	10:50	
Test Request #/Location	Stage 2	Stage 2	Stage 2	
Easting	527295	527284	527272	
Northing	6917139	6917103	6917203	
Elevation (m)	46.3	47.9	42.0	
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	
Test Depth (mm)	150	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	18	19	18	
Field Wet Density (FWD) t/m <sup>3</sup>	2.21	2.12	2.24	
Field Moisture Content %	10.0	11.7	9.7	
Field Dry Density (FDD) t/m <sup>3</sup>	2.00	1.90	2.04	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.22	2.25	2.21	
Moisture Variation (Wv) %	**	**	**	
Adjusted Moisture Variation %	0.5	0.0	1.5	
Hilf Density Ratio (%)	<b>99.5</b>	<b>94.5</b>	<b>101.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-10  
**Issue Number:** 1  
**Date Issued:** 15/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1009  
**Date Sampled:** 03/11/2023  
**Dates Tested:** 03/11/2023 - 10/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1009A	G23-1009B	G23-1009C	G23-1009D	G23-1009E	G23-1009F
Sample Number	G23-1009A	G23-1009B	G23-1009C	G23-1009D	G23-1009E	G23-1009F
Client Sample #	**	**	**	**	**	**
Date Tested	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023
Time Tested	10:10	10:15	10:20	10:30	10:50	10:55
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 1	Stage 1
Easting	527279	527285	527284	527273	527496	527477
Northing	6917203	6917133	6917094	6917086	6917074	6917133
Elevation (m)	45.9	48.5	47.8	48.7	58.6	58.1
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	37.5	19.0	19.0	19.0
Percentage of Wet Oversize (%)	18	12	7	15	16	12
Field Wet Density (FWD) t/m <sup>3</sup>	2.09	2.17	2.32	2.15	2.06	1.95
Field Moisture Content %	10.9	11.8	8.7	9.6	11.1	9.3
Field Dry Density (FDD) t/m <sup>3</sup>	1.88	1.94	2.13	1.96	1.85	1.78
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.29	2.28	2.36	2.26	2.20	2.14
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	-2.0	-1.5	-2.5	0.0	0.0	2.0
Hilf Density Ratio (%)	<b>91.0</b>	<b>95.0</b>	<b>98.0</b>	<b>95.0</b>	<b>93.5</b>	<b>91.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-14  
**Issue Number:** 1  
**Date Issued:** 21/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1026  
**Date Sampled:** 09/11/2023  
**Dates Tested:** 09/11/2023 - 20/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1026A	G23-1026B	G23-1026C	G23-1026D	G23-1026E
Sample Number	G23-1026A	G23-1026B	G23-1026C	G23-1026D	G23-1026E
Client Sample #	**	**	**	**	**
Date Tested	09/11/2023	09/11/2023	09/11/2023	09/11/2023	09/11/2023
Time Tested	10:10	10:15	10:25	10:30	10:40
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 1
Easting	527265	527295	527296	527300	527476
Northing	6917045	6917081	6917128	6917159	6917132
Elevation (m)	50.5	49.9	48.7	48.1	58.3
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	37.5	19.0	19.0
Percentage of Wet Oversize (%)	17	14	19	15	8
Field Wet Density (FWD) t/m <sup>3</sup>	2.22	2.04	2.19	2.14	2.02
Field Moisture Content %	10.7	9.9	11.8	10.5	9.5
Field Dry Density (FDD) t/m <sup>3</sup>	2.00	1.85	1.96	1.93	1.84
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.24	2.18	2.28	2.21	2.17
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	-0.5	1.5	-1.5	0.0	2.0
Hilf Density Ratio (%)	<b>99.0</b>	<b>93.5</b>	<b>96.0</b>	<b>97.0</b>	<b>93.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-14  
**Issue Number:** 1  
**Date Issued:** 21/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1026  
**Date Sampled:** 09/11/2023  
**Dates Tested:** 09/11/2023 - 20/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1026F	G23-1026G	G23-1026H	G23-1026I	
Sample Number	G23-1026F	G23-1026G	G23-1026H	G23-1026I	
Client Sample #	**	**	**	**	
Date Tested	09/11/2023	09/11/2023	09/11/2023	09/11/2023	
Time Tested	10:45	11:00	11:15	11:25	
Test Request #/Location	Stage 1	Stage 2 (Retest G23-988B)	Stage 1 (Retest G23-988G)	Stage 2 (Retest G23-992A)	
Easting	527483	527351	527522	527288	
Northing	6917104	6917138	6917149	6917135	
Elevation (m)	58.7	49.2	49.5	0.7m Above Natural	
Soil Description	Sandy Gravelly Clay, Brown	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown	Sandy Gravelly Clay, Brown	
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 (%)	7	16	18	9	
Field Wet Density (FWD) t/m <sup>3</sup>	2.08	2.17	2.19	2.11	
Field Moisture Content %	10.6	11.7	11.6	11.0	
Field Dry Density (FDD) t/m <sup>3</sup>	1.88	1.94	1.96	1.90	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.19	2.24	2.24	2.19	
Moisture Variation (Wv) %	**	**	**	**	
Adjusted Moisture Variation %	0.0	0.0	1.0	0.5	
Hilf Density Ratio (%)	95.0	97.0	97.5	96.5	
Compaction Method	Standard	Standard	Standard	Standard	
Report Remarks	**	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-15  
**Issue Number:** 1  
**Date Issued:** 27/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1029  
**Date Sampled:** 10/11/2023  
**Dates Tested:** 10/11/2023 - 22/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1029A	G23-1029B	G23-1029C	G23-1029D
Sample Number				
Client Sample #	**	**	**	**
Date Tested	10/11/2023	10/11/2023	10/11/2023	10/11/2023
Time Tested	10:05	10:10	10:20	10:25
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3
Easting	527243	527285	527319	527271
Northing	6917018	6917111	6917146	6917169
Elevation (m)	52.4	47.1	46.8	45.7
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	37.5
Percentage of Wet Oversize (%)	17	16	19	14
Field Wet Density (FWD) t/m <sup>3</sup>	2.12	2.15	2.04	2.09
Field Moisture Content %	11.3	11.1	9.4	10.7
Field Dry Density (FDD) t/m <sup>3</sup>	1.91	1.93	1.86	1.89
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.22	2.24	2.25	2.20
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	0.0	-0.5	0.5	0.0
Hilf Density Ratio (%)	<b>95.5</b>	<b>96.0</b>	<b>90.5</b>	<b>95.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-15  
**Issue Number:** 1  
**Date Issued:** 27/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1029  
**Date Sampled:** 10/11/2023  
**Dates Tested:** 10/11/2023 - 22/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1029E	G23-1029F	G23-1029G	G23-1029H
Sample Number	G23-1029E	G23-1029F	G23-1029G	G23-1029H
Client Sample #	**	**	**	**
Date Tested	10/11/2023	10/11/2023	10/11/2023	10/11/2023
Time Tested	10:30	10:45	11:00	11:05
Test Request #/Location	Stage 2 & 3	Stage 1 (Retest G23-994A)	Stage 2 (Retest G23-994H)	Stage 2 (Retest G23-994I)
Easting	527293	527508	527296	527284
Northing	6917208	6917096	6917142	6917157
Elevation (m)	45.0	54.0	45.0	44.4
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
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 (%)	19	17	19	14
Field Wet Density (FWD) t/m <sup>3</sup>	2.21	2.13	2.06	2.20
Field Moisture Content %	12.5	9.5	9.9	12.3
Field Dry Density (FDD) t/m <sup>3</sup>	1.96	1.94	1.87	1.96
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.19	2.21	2.25	2.17
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	1.0	1.5	1.0	1.0
Hilf Density Ratio (%)	<b>101.0</b>	<b>96.0</b>	<b>91.5</b>	<b>101.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-17  
**Issue Number:** 1  
**Date Issued:** 27/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1042  
**Date Sampled:** 15/11/2023 10:00  
**Dates Tested:** 15/11/2023 - 24/11/2023  
**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:** Upper Coomera  
**Material:** Sandy Gravelly Clay  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1042A	G23-1042B	G23-1042C	G23-1042D	G23-1042E
Sample Number	G23-1042A	G23-1042B	G23-1042C	G23-1042D	G23-1042E
Client Sample #	**	**	**	**	**
Date Tested	15/11/2023	15/11/2023	15/11/2023	15/11/2023	15/11/2023
Time Tested	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Stages 2 & 3	Stages 2 & 3	Stages 2 & 3	Stages 2 & 3	Stages 2 & 3
Easting	527254	527239	527291	527300	527327
Northing	6917102	6917093	6917142	6917153	6917144
Elevation (m)	50.5	51.4	48.2	49.3	48.6
Soil Description	Sandy Gravelly Clay, brown	Sandy Gravelly Clay, brown	Sandy Gravelly Clay, brown	Sandy Gravelly Clay, 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	20	19	19	19
Field Wet Density (FWD) t/m <sup>3</sup>	2.20	2.20	2.18	2.19	2.23
Field Moisture Content %	8.7	9.7	11.5	11.1	9.1
Field Dry Density (FDD) t/m <sup>3</sup>	2.03	2.00	1.96	1.97	2.04
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.25	2.20	2.27	2.26	2.21
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	2.0	1.5	-0.5	-0.5	1.5
Hilf Density Ratio (%)	<b>98.0</b>	<b>99.5</b>	<b>96.0</b>	<b>97.0</b>	<b>100.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-17  
**Issue Number:** 1  
**Date Issued:** 27/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1042  
**Date Sampled:** 15/11/2023 10:00  
**Dates Tested:** 15/11/2023 - 24/11/2023  
**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:** Upper Coomera  
**Material:** Sandy Gravelly Clay  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1042F	G23-1042G	G23-1042H	G23-1042I	G23-1042J
Sample Number	G23-1042F	G23-1042G	G23-1042H	G23-1042I	G23-1042J
Client Sample #	**	**	**	**	**
Date Tested	15/11/2023	15/11/2023	15/11/2023	15/11/2023	15/11/2023
Time Tested	10:25	10:30	10:35	10:40	10:45
Test Request #/Location	Stage 1 (Retest G23-1009E)	Stage 1 (Retest G23-1009F)	Stages 2 & 3 (Retest G23-1011B)	Stages 2 & 3 (Retest G23-1018C)	Stages 2 & 3 (Retest G23-1024A)
Easting	527496	525477	527270	527279	527278
Northing	6917074	6917133	6917203	6917118	6917203
Elevation (m)	58.6	58.1	42.7	47.8	43.5
Soil Description	Sandy Gravelly Clay, brown	Sandy Gravelly Clay, brown	Sandy Gravelly Clay, brown	Sandy Gravelly Clay, 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	18	16	13	16
Field Wet Density (FWD) t/m <sup>3</sup>	2.21	2.23	2.16	2.18	2.21
Field Moisture Content %	8.8	10.4	-100.1	10.5	9.5
Field Dry Density (FDD) t/m <sup>3</sup>	2.03	2.02	-1646.44	1.98	2.02
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.23	2.20	2.26	2.25	2.24
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	1.5	1.0	-0.5	-0.5	1.5
Hilf Density Ratio (%)	<b>99.0</b>	<b>101.5</b>	<b>95.5</b>	<b>97.5</b>	<b>99.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-18  
**Issue Number:** 1  
**Date Issued:** 27/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1037  
**Date Sampled:** 14/11/2023  
**Dates Tested:** 14/11/2023 - 23/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1037A	G23-1037B	G23-1037C	G23-1037D
Sample Number	G23-1037A	G23-1037B	G23-1037C	G23-1037D
Client Sample #	**	**	**	**
Date Tested	14/11/2023	14/11/2023	14/11/2023	14/11/2023
Time Tested	10:10	10:15	10:20	10:25
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3
Easting	527331	527304	527224	527235
Northing	6917145	6917127	6917029	6917025
Elevation (m)	49.0	49.2	523.0	53.4
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	19.0	37.5	19.0	19.0
Percentage of Wet Oversize (%)	20	13	19	11
Field Wet Density (FWD) t/m <sup>3</sup>	2.17	2.17	2.22	2.15
Field Moisture Content %	10.5	10.3	11.6	9.0
Field Dry Density (FDD) t/m <sup>3</sup>	1.96	1.97	1.99	1.97
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.20	2.27	2.23	2.26
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	1.0	0.0	0.0	0.5
Hilf Density Ratio (%)	<b>98.5</b>	<b>95.5</b>	<b>100.0</b>	<b>95.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-18  
**Issue Number:** 1  
**Date Issued:** 27/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1037  
**Date Sampled:** 14/11/2023  
**Dates Tested:** 14/11/2023 - 23/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1037E	G23-1037F	G23-1037G	
Sample Number	G23-1037E	G23-1037F	G23-1037G	
Client Sample #	**	**	**	
Date Tested	14/11/2023	14/11/2023	14/11/2023	
Time Tested	10:45	11:05	11:10	
Test Request #/Location	Stage 1 (Retest G23-1001D)	Stage 2 (Retest G23-1001F)	Stage 2 (Retest G23-1009A)	
Easting	527463	527284	527279	
Northing	6917130	6917103	6917203	
Elevation (m)	57.8	47.9	45.9	
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	
Test Depth (mm)	150	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	18	19	18	
Field Wet Density (FWD) t/m <sup>3</sup>	2.12	2.15	2.09	
Field Moisture Content %	11.0	12.2	8.5	
Field Dry Density (FDD) t/m <sup>3</sup>	1.91	1.92	1.93	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.21	2.26	2.25	
Moisture Variation (Wv) %	**	**	**	
Adjusted Moisture Variation %	0.5	0.0	2.0	
Hilf Density Ratio (%)	<b>96.0</b>	<b>95.0</b>	<b>93.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-19  
**Issue Number:** 1  
**Date Issued:** 28/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1047  
**Date Sampled:** 16/11/2023  
**Dates Tested:** 16/11/2023 - 27/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1047A	G23-1047B	G23-1047C	G23-1047D	G23-1047E	G23-1047F
Sample Number	G23-1047A	G23-1047B	G23-1047C	G23-1047D	G23-1047E	G23-1047F
Client Sample #	**	**	**	**	**	**
Date Tested	16/11/2023	16/11/2023	16/11/2023	16/11/2023	16/11/2023	16/11/2023
Time Tested	09:50	09:55	10:00	10:05	10:15	10:25
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3
Easting	527297	527281	527247	527281	527236	527309
Northing	6917114	6917131	6917118	6917090	6917025	6917193
Elevation (m)	49.5	49.9	50.4	50.8	53.0	42.5
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	37.5	19.0	19.0
Percentage of Wet Oversize (%)	19	17	19	18	6	7
Field Wet Density (FWD) t/m <sup>3</sup>	2.20	2.17	2.24	2.22	2.01	2.14
Field Moisture Content %	9.9	10.2	9.3	8.8	10.1	11.6
Field Dry Density (FDD) t/m <sup>3</sup>	2.00	1.97	2.04	2.04	1.83	1.92
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.29	2.28	2.23	2.28	2.15	2.23
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	0.0	0.0	1.5	0.5	1.5	-0.5
Hilf Density Ratio (%)	<b>96.0</b>	<b>95.0</b>	<b>100.0</b>	<b>97.5</b>	<b>93.5</b>	<b>96.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-19  
**Issue Number:** 1  
**Date Issued:** 28/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1047  
**Date Sampled:** 16/11/2023  
**Dates Tested:** 16/11/2023 - 27/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	G23-1047G	G23-1047H	G23-1047I	G23-1047J	G23-1047K	
Client Sample #	**	**	**	**	**	
Date Tested	16/11/2023	16/11/2023	16/11/2023	16/11/2023	16/11/2023	
Time Tested	10:30	10:35	10:50	11:00	11:10	
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3 (Retest G23-1024B)	Stage 1 (Retest G23-1026E)	Stage 2 & 3 (Retest G23-1026B)	
Easting	527303	527314	527296	527476	527295	
Northing	6917190	6917197	6917223	6917132	6917081	
Elevation (m)	43.0	43.5	43.4	58.3	49.9	
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, 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 (%)	7	11	14	15	19	
Field Wet Density (FWD) t/m <sup>3</sup>	2.12	2.15	2.19	2.19	2.22	
Field Moisture Content %	15.6	10.2	10.4	9.8	9.1	
Field Dry Density (FDD) t/m <sup>3</sup>	1.83	1.95	1.98	1.99	2.04	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.20	2.22	2.29	2.26	2.24	
Moisture Variation (Wv) %	**	**	**	**	**	
Adjusted Moisture Variation %	1.0	0.0	-0.5	0.5	1.0	
Hilf Density Ratio (%)	<b>96.5</b>	<b>96.5</b>	<b>95.5</b>	<b>96.5</b>	<b>99.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-21  
**Issue Number:** 1  
**Date Issued:** 30/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1059  
**Date Sampled:** 20/11/2023  
**Dates Tested:** 20/11/2023 - 29/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Rob Sharpe

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1059A	G23-1059B	G23-1059C	G23-1059D	G23-1059E	G23-1059F
Sample Number	G23-1059A	G23-1059B	G23-1059C	G23-1059D	G23-1059E	G23-1059F
Client Sample #	**	**	**	**	**	**
Date Tested	20/11/2023	20/11/2023	20/11/2023	20/11/2023	20/11/2023	20/11/2023
Time Tested	10:10	10:20	10:25	10:30	10:40	11:00
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 1
Easting	527293	527292	527264	527289	527226	527391
Northing	6917201	6917140	6917134	6917086	6917022	6917904
Elevation (m)	44.2	49.3	49.6	51.7	54.5	51.6
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Clay w/ Gravel, Brown	Sandy Clay w/ Gravel, Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	19	9	19	18	8	19
Field Wet Density (FWD) t/m <sup>3</sup>	2.18	2.16	2.20	2.19	1.96	2.04
Field Moisture Content %	10.1	8.1	10.4	10.6	15.9	11.2
Field Dry Density (FDD) t/m <sup>3</sup>	1.98	2.00	1.99	1.98	1.69	1.83
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.26	2.24	2.20	2.21	1.96	2.09
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	0.0	0.5	0.0	0.5	0.5	0.5
Hilf Density Ratio (%)	<b>96.5</b>	<b>96.5</b>	<b>100.0</b>	<b>99.0</b>	<b>100.0</b>	<b>97.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-22  
**Issue Number:** 1  
**Date Issued:** 30/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1055  
**Date Sampled:** 17/11/2023  
**Dates Tested:** 17/11/2023 - 29/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Dave Trotman

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1055A	G23-1055B	G23-1055C	G23-1055D	G23-1055E
Sample Number	G23-1055A	G23-1055B	G23-1055C	G23-1055D	G23-1055E
Client Sample #	**	**	**	**	**
Date Tested	17/11/2023	17/11/2023	17/11/2023	17/11/2023	17/11/2023
Time Tested	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3
Easting	527232	527259	527301	527270	527318
Northing	6917039	6917085	6917095	6917117	6917134
Elevation (m)	53.7	51.6	51.4	50.3	50.7
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, 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	14	19	13	12
Field Wet Density (FWD) t/m <sup>3</sup>	2.20	2.14	2.22	2.17	2.19
Field Moisture Content %	9.0	8.8	9.8	8.9	10.3
Field Dry Density (FDD) t/m <sup>3</sup>	2.02	1.97	2.02	2.00	1.98
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.28	2.24	2.25	2.23	2.25
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	0.0	0.0	1.5	0.5	0.0
Hilf Density Ratio (%)	<b>96.5</b>	<b>96.0</b>	<b>98.5</b>	<b>97.5</b>	<b>97.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-22  
**Issue Number:** 1  
**Date Issued:** 30/11/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1055  
**Date Sampled:** 17/11/2023  
**Dates Tested:** 17/11/2023 - 29/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Dave Trotman

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	G23-1055F	G23-1055G	G23-1055H	G23-1055I	
Client Sample #	**	**	**	**	
Date Tested	17/11/2023	17/11/2023	17/11/2023	17/11/2023	
Time Tested	10:35	10:40	11:00	11:05	
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 1	Stage 1	
Easting	527316	527305	527391	527407	
Northing	6917196	6917178	6916902	6916915	
Elevation (m)	44.0	43.6	**	**	
Layer / Reduced Level	**	**	6.5m Below FL	6m Below FL	
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	
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	13	14	12	
Field Wet Density (FWD) t/m <sup>3</sup>	2.15	2.16	2.14	2.19	
Field Moisture Content %	11.5	10.4	10.3	10.2	
Field Dry Density (FDD) t/m <sup>3</sup>	1.93	1.96	1.94	1.99	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.24	2.23	2.21	2.21	
Moisture Variation (Wv) %	**	**	**	**	
Adjusted Moisture Variation %	-0.5	-0.5	0.5	0.0	
Hilf Density Ratio (%)	<b>96.0</b>	<b>97.0</b>	<b>97.0</b>	<b>99.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-24  
**Issue Number:** 1  
**Date Issued:** 01/12/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1071  
**Date Sampled:** 27/11/2023 10:00  
**Dates Tested:** 27/11/2023 - 30/11/2023  
**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:** Courtney Court, Upper Coomera  
**Material:** Various  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1071A	G23-1071B	G23-1071C	G23-1071D
Sample Number	G23-1071A	G23-1071B	G23-1071C	G23-1071D
Client Sample #	**	**	**	**
Date Tested	27/11/2023	27/11/2023	27/11/2023	27/11/2023
Time Tested	10:00	10:10	10:20	10:30
Test Request #/Location	Stage 1	Stage 1	Stage 2 & 3	Stage 2 & 3
Easting	527414	527401	527353	527332
Northing	6916906	6916920	6917166	6917187
Elevation (m)	51.0	51.5	48.7	47.5
Soil Description	Sandy Gravelly Clay	Sandy Clay	Sandy Gravelly Clay	Sandy Gravelly Clay
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 (%)	15	6	13	9
Field Wet Density (FWD) t/m <sup>3</sup>	2.13	2.07	2.22	2.13
Field Moisture Content %	11.1	12.5	10.0	8.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.91	1.84	2.02	1.96
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.23	2.15	2.22	2.23
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	-0.5	0.5	1.5	1.0
Hilf Density Ratio (%)	<b>95.5</b>	<b>96.5</b>	<b>100.0</b>	<b>95.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC


# Material Test Report

**Report Number:** PG-4116-A-25  
**Issue Number:** 1  
**Date Issued:** 01/12/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1068  
**Date Sampled:** 24/11/2023  
**Dates Tested:** 24/11/2023 - 30/11/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Rob Sharpe

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1068A	G23-1068B	G23-1068C
Sample Number	G23-1068A	G23-1068B	G23-1068C
Client Sample #	**	**	**
Date Tested	24/11/2023	24/11/2023	24/11/2023
Time Tested	09:35	09:45	09:50
Test Request #/Location	Stage 1	Stage 1	Stage 1
Easting	527420	527420	527414
Northing	6916904	6916907	6916908
Elevation (m)	50.0	50.5	51.0
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	16	14	18
Field Wet Density (FWD) t/m <sup>3</sup>	2.13	2.17	2.12
Field Moisture Content %	11.5	11.2	11.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.91	1.95	1.90
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.18	2.17	2.19
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	0.0	0.0	0.5
Hilf Density Ratio (%)	<b>97.5</b>	<b>100.0</b>	<b>97.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-26  
**Issue Number:** 1  
**Date Issued:** 05/12/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1074  
**Date Sampled:** 28/11/2023  
**Dates Tested:** 28/11/2023 - 04/12/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	G23-1074A	G23-1074B	G23-1074C	G23-1074D	G23-1074E	G23-1074F
Client Sample #	**	**	**	**	**	**
Date Tested	28/11/2023	28/11/2023	28/11/2023	28/11/2023	28/11/2023	28/11/2023
Time Tested	10:05	10:10	10:25	10:30	10:40	10:55
Test Request #/Location	Stage 1	Stage 1	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3 (Retest G23-1029C)	Stage 2 & 3 (Retest G23-1029G)
Easting	527402	527416	527332	527335	527319	527296
Northing	6916897	6916912	6917205	6917217	6917146	6917142
Elevation (m)	51.9	52.3	47.1	47.5	46.8	45.0
Soil Description	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Gravelly Clay, Brown	Sandy Clay w/ Gravel, Brown	Sandy Gravelly Clay, Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	37.5	37.5	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	17	14	19	16	15	19
Field Wet Density (FWD) t/m <sup>3</sup>	2.35	2.28	2.18	2.16	2.02	2.19
Field Moisture Content %	9.7	10.2	9.9	9.5	12.8	9.7
Field Dry Density (FDD) t/m <sup>3</sup>	2.14	2.07	1.99	1.97	1.79	1.99
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.31	2.27	2.25	2.25	2.23	2.29
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	0.0	-0.5	-0.5	-1.0	-2.0	0.0
Hilf Density Ratio (%)	<b>101.5</b>	<b>100.5</b>	<b>97.0</b>	<b>96.0</b>	<b>90.5</b>	<b>95.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-27  
**Issue Number:** 1  
**Date Issued:** 06/12/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1088  
**Date Sampled:** 01/12/2023  
**Dates Tested:** 01/12/2023 - 05/12/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1088A	G23-1088B	G23-1088C	G23-1088D
Sample Number	G23-1088A	G23-1088B	G23-1088C	G23-1088D
Client Sample #	**	**	**	**
Date Tested	01/12/2023	01/12/2023	01/12/2023	01/12/2023
Time Tested	13:05	13:10	13:15	13:30
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 1
Easting	527312	527318	527336	527413
Northing	6917194	6917176	6917164	6916907
Elevation (m)	47.8	48.0	48.8	52.7
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
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 (%)	18	11	14	18
Field Wet Density (FWD) t/m <sup>3</sup>	2.23	2.16	2.16	2.22
Field Moisture Content %	8.5	10.3	9.9	11.4
Field Dry Density (FDD) t/m <sup>3</sup>	2.06	1.96	1.97	1.99
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.23	2.24	2.24	2.26
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	2.0	0.0	-0.5	-0.5
Hilf Density Ratio (%)	<b>100.0</b>	<b>96.5</b>	<b>96.5</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-27  
**Issue Number:** 1  
**Date Issued:** 06/12/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1088  
**Date Sampled:** 01/12/2023  
**Dates Tested:** 01/12/2023 - 05/12/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1088E	G23-1088F	G23-1088G	
Sample Number	G23-1088E	G23-1088F	G23-1088G	
Client Sample #	**	**	**	
Date Tested	01/12/2023	01/12/2023	01/12/2023	
Time Tested	13:35	13:50	14:00	
Test Request #/Location	Stage 1	Stage 2 & 3 (Retest G23-1037G)	Stage 2 & 3 (Retest G23-1047E)	
Easting	527410	527296	6917203	
Northing	6916919	527236	6917025	
Elevation (m)	52.9	45.9	53.0	
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	
Test Depth (mm)	150	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	18	18	8	
Field Wet Density (FWD) t/m <sup>3</sup>	2.22	2.18	2.14	
Field Moisture Content %	10.3	9.8	10.2	
Field Dry Density (FDD) t/m <sup>3</sup>	2.01	1.98	1.94	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.25	2.23	2.23	
Moisture Variation (Wv) %	**	**	**	
Adjusted Moisture Variation %	0.0	0.0	-0.5	
Hilf Density Ratio (%)	<b>98.5</b>	<b>97.5</b>	<b>96.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-30  
**Issue Number:** 1  
**Date Issued:** 12/12/2023  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1107  
**Date Sampled:** 06/12/2023  
**Dates Tested:** 06/12/2023 - 11/12/2023  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1107A	G23-1107B	G23-1107C	G23-1107D	G23-1107E
Sample Number	**	**	**	**	**
Client Sample #	**	**	**	**	**
Date Tested	06/12/2023	06/12/2023	06/12/2023	06/12/2023	06/12/2023
Time Tested	10:10	10:15	10:20	10:25	10:40
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1	Stage 2 & 3 (Retest G23-1074E)
Easting	527417	527416	527427	527427	527319
Northing	6916902	6916892	6916899	6916892	6917146
Elevation (m)	52.2	51.0	51.5	51.7	46.8
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	37.5	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	13	19	18	18	15
Field Wet Density (FWD) t/m <sup>3</sup>	2.22	2.18	2.14	2.18	2.21
Field Moisture Content %	7.4	10.4	10.2	9.4	9.5
Field Dry Density (FDD) t/m <sup>3</sup>	2.06	1.98	1.94	1.99	2.02
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.23	2.27	2.23	2.24	2.27
Moisture Variation (Wv) %	**	**	**	**	**
Adjusted Moisture Variation %	1.5	-0.5	0.0	0.0	-0.5
Hilf Density Ratio (%)	<b>99.5</b>	<b>96.0</b>	<b>96.0</b>	<b>97.5</b>	<b>97.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-37  
**Issue Number:** 1  
**Date Issued:** 18/01/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1166  
**Date Sampled:** 20/12/2023  
**Dates Tested:** 20/12/2023 - 11/01/2024  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Remarks:** Samples G23-1166A, G23-1166B, & G23-1166D have greater than 20% by mass of particles retained on the 37.5mm sieve and therefore this test method is not applicable.  
**Specification:** Minimum 95% Standard Compaction  
**Site Selection:** Selected by GTA  
**Location:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1166A	G23-1166B	G23-1166C	G23-1166D
Sample Number	G23-1166A	G23-1166B	G23-1166C	G23-1166D
Client Sample #	**	**	**	**
Date Tested	20/12/2023	20/12/2023	20/12/2023	20/12/2023
Time Tested	10:05	10:10	10:15	10:30
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 1
Easting	527246	527261	527279	527416
Northing	6917141	6917132	6917112	6916888
Elevation (m)	50.0	50.8	51.1	53.0
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	37.5	37.5	37.5	37.5
Percentage of Wet Oversize (%)	29	28	15	31
Field Wet Density (FWD) t/m <sup>3</sup>	2.14	2.21	2.24	2.17
Field Moisture Content %	9.4	9.4	7.6	7.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.95	2.02	2.08	2.01
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	2.28	**
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	**	**	2.0	**
Hilf Density Ratio (%)	**	**	<b>98.0</b>	**
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-37  
**Issue Number:** 1  
**Date Issued:** 18/01/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1166  
**Date Sampled:** 20/12/2023  
**Dates Tested:** 20/12/2023 - 11/01/2024  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Remarks:** Samples G23-1166A, G23-1166B, & G23-1166D have greater than 20% by mass of particles retained on the 37.5mm sieve and therefore this test method is not applicable.  
**Specification:** Minimum 95% Standard Compaction  
**Site Selection:** Selected by GTA  
**Location:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G23-1166E	G23-1166F	G23-1166G	
Sample Number	G23-1166E	G23-1166F	G23-1166G	
Client Sample #	**	**	**	
Date Tested	20/12/2023	20/12/2023	20/12/2023	
Time Tested	10:40	11:05	11:15	
Test Request #/Location	Stage 1	Stage 2 & 3 (Retest G23-1133C)	Stage 2 & 3 (Retest G23-1155A)	
Easting	527394	527298	527287	
Northing	6916918	6917114	6917155	
Elevation (m)	53.5	51.6	49.5	
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	
Test Depth (mm)	150	150	150	
Sieve used to determine oversize (mm)	37.5	37.5	37.5	
Percentage of Wet Oversize (%)	18	8	11	
Field Wet Density (FWD) t/m <sup>3</sup>	2.17	2.23	2.23	
Field Moisture Content %	9.2	8.6	8.7	
Field Dry Density (FDD) t/m <sup>3</sup>	1.99	2.05	2.05	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.28	2.25	2.31	
Moisture Variation (Wv) %	**	**	**	
Adjusted Moisture Variation %	0.5	1.5	-0.5	
Hilf Density Ratio (%)	<b>99.0</b>	<b>99.0</b>	<b>97.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-38  
**Issue Number:** 1  
**Date Issued:** 18/01/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1177  
**Date Sampled:** 15/01/2024  
**Dates Tested:** 15/01/2024 - 17/01/2024  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Remarks:** Samples G23-1177D to G23-1177F have greater than 20% by mass of particles retained on the 37.5mm sieve and therefore this test is not applicable.  
**Specification:** Minimum 95% Standard Compaction  
**Site Selection:** Selected by GTA  
**Location:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	G24-1177A	G24-1177B	G24-1177C	G24-1177D	G24-1177E	G24-1177F
Client Sample #	**	**	**	**	**	**
Date Tested	15/01/2024	15/01/2024	15/01/2024	15/01/2024	15/01/2024	15/01/2024
Time Tested	10:05	10:10	10:20	10:25	12:30	12:40
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 2 & 3	Stage 1	Stage 1
Easting	527367	527327	527317	527379	527420	527407
Northing	6917200	6917206	6917166	6917139	6916882	6916914
Elevation (m)	51.1	50.3	51.1	52.9	54.2	54.9
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	37.5	37.5	37.5	37.5	37.5	37.5
Percentage of Wet Oversize (%)	14	19	18	24	24	28
Field Wet Density (FWD) t/m <sup>3</sup>	2.22	2.26	2.30	2.19	2.14	2.17
Field Moisture Content %	10.1	8.5	7.4	6.9	6.2	5.7
Field Dry Density (FDD) t/m <sup>3</sup>	2.01	2.08	2.14	2.05	2.02	2.05
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.28	2.31	2.28	**	**	**
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	-0.5	0.0	2.0	**	**	**
Hilf Density Ratio (%)	<b>97.0</b>	<b>98.0</b>	<b>101.0</b>	**	**	**
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-39  
**Issue Number:** 1  
**Date Issued:** 01/02/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1182  
**Date Sampled:** 23/01/2024  
**Dates Tested:** 23/01/2024 - 25/01/2024  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Remarks:** Samples have greater than 20% by mass of particles retained on the 37.5mm sieve and therefore this test method is not applicable.  
**Specification:** Minimum 95% Standard Compaction  
**Site Selection:** Selected by GTA  
**Location:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Dave Trotman

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	G24-1182A	G24-1182B	
Client Sample #	**	**	
Date Tested	23/01/2024	23/01/2024	
Time Tested	10:15	10:35	
Test Request #/Location	Stage 2 & 3	Stage 1	
Easting	527348	527404	
Northing	6917232	6916913	
Elevation (m)	53.0	55.5	
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	37.5	37.5	
Percentage of Wet Oversize (%)	21	30	
Field Wet Density (FWD) t/m <sup>3</sup>	2.04	2.18	
Field Moisture Content %	7.0	7.9	
Field Dry Density (FDD) t/m <sup>3</sup>	1.91	2.02	
Peak Converted Wet Density t/m <sup>3</sup>	**	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**	**	
Compaction Method	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-40  
**Issue Number:** 1  
**Date Issued:** 01/02/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1187  
**Date Sampled:** 24/01/2024  
**Dates Tested:** 24/01/2024 - 29/01/2024  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Remarks:** Samples have greater than 20% by mass of particles retained on the 37.5mm sieve and therefore this test method is not applicable.  
**Specification:** Minimum 95% Standard Compaction  
**Site Selection:** Selected by GTA  
**Location:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Dave Trotman

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	G24-1187A	G24-1187B	G24-1187C	G24-1187D
Client Sample #	**	**	**	**
Date Tested	24/01/2024	24/01/2024	24/01/2024	24/01/2024
Time Tested	14:20	14:30	14:40	14:45
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527418	527404	527457	527439
Northing	6916880	6916905	6916864	6916869
Elevation (m)	55.0	56.0	51.4	52.7
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	37.5	37.5	37.5	37.5
Percentage of Wet Oversize (%)	41	24	48	39
Field Wet Density (FWD) t/m <sup>3</sup>	2.26	2.18	2.08	2.23
Field Moisture Content %	9.4	9.1	7.9	7.1
Field Dry Density (FDD) t/m <sup>3</sup>	2.06	2.00	1.93	2.08
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**	**	**	**
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** PG-4116-A-41  
**Issue Number:** 1  
**Date Issued:** 01/02/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1190  
**Date Sampled:** 25/01/2024  
**Dates Tested:** 25/01/2024 - 30/01/2024  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Dave Trotman

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G24-1190A	G24-1190B	G24-1190C	G24-1190D	G24-1190E	G24-1190F
Sample Number	G24-1190A	G24-1190B	G24-1190C	G24-1190D	G24-1190E	G24-1190F
Client Sample #	**	**	**	**	**	**
Date Tested	25/01/2024	25/01/2024	25/01/2024	25/01/2024	25/01/2024	25/01/2024
Time Tested	10:10	10:15	13:10	13:15	13:25	13:30
Test Request #/Location	Stage 2 & 3	Stage 2 & 3	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527343	527341	527405	527422	527444	527390
Northing	6917240	6917226	6916891	6916876	6916934	6916923
Elevation (m)	50.5	51.0	56.2	55.0	56.5	57.1
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	37.5	37.5	37.5	37.5	37.5	37.5
Percentage of Wet Oversize (%)	9	6	19	12	11	5
Field Wet Density (FWD) t/m <sup>3</sup>	2.25	2.22	2.25	2.23	2.27	2.18
Field Moisture Content %	7.4	8.3	6.3	6.7	8.3	7.6
Field Dry Density (FDD) t/m <sup>3</sup>	2.10	2.05	2.11	2.09	2.09	2.03
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.23	2.25	2.29	2.27	2.31	2.29
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	2.0	0.5	0.5	1.0	0.0	0.5
Hilf Density Ratio (%)	<b>101.0</b>	<b>98.5</b>	<b>98.0</b>	<b>98.0</b>	<b>98.0</b>	<b>95.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** PG-4116-A-44  
**Issue Number:** 1  
**Date Issued:** 09/02/2024  
**Client:** CCA Winslow  
 c/o 3 Jowett Street, Coomera Qld 4209,  
**Project Number:** PG-4116-A  
**Project Name:** Residential Subdivision  
**Project Location:** Courtney Drive, Upper Coomera  
**Work Request:** 1205  
**Date Sampled:** 06/02/2024  
**Dates Tested:** 06/02/2024 - 07/02/2024  
**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:** Upper Coomera  
**Material:** Earthworks Fill  
**Material Source:** Onsite

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Approved Signatory: Ian Masman

Laboratory Manager

NATA Accredited Laboratory Number: 21130

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	G24-1205A	G24-1205B	G24-1205C	G24-1205D	G24-1205E	G24-1205F
Client Sample #	**	**	**	**	**	**
Date Tested	06/02/2024	06/02/2024	06/02/2024	06/02/2024	06/02/2024	06/02/2024
Time Tested	13:00	13:05	13:10	13:20	13:30	13:35
Test Request #/Location	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
Easting	527405	527413	527397	527389	527407	527443
Northing	6916907	6916910	6916921	6916936	6916941	6916943
Elevation (m)	57.0	57.3	58.3	58.0	59.0	59.9
Soil Description	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown	Sandy Gravelly Clay. Brown
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	37.5	37.5	37.5	37.5	37.5	37.5
Percentage of Wet Oversize (%)	18	18	4	6	10	5
Field Wet Density (FWD) t/m <sup>3</sup>	2.21	2.20	2.24	2.20	2.24	2.20
Field Moisture Content %	8.0	8.5	7.5	8.7	8.4	8.9
Field Dry Density (FDD) t/m <sup>3</sup>	2.05	2.03	2.08	2.03	2.06	2.02
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.30	2.30	2.31	2.31	2.31	2.25
Moisture Variation (Wv) %	**	**	**	**	**	**
Adjusted Moisture Variation %	0.5	1.0	-1.0	-1.5	-1.0	0.5
Hilf Density Ratio (%)	<b>96.0</b>	<b>95.5</b>	<b>97.0</b>	<b>95.0</b>	<b>97.0</b>	<b>97.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

**Moisture Variation Note:**

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