



EARTHWORKS CERTIFICATION
LEVEL 1 INSPECTION & TESTING PROGRAM

Courtney Drive
Upper Coomera

HB Land

February 2026

PG-4116-A

E: info@pacgeo.com.au

www.pacgeo.com.au

ABN: 62 615 248 952

Ref: PG-4116-A, 2026-02-24, LVR VER 1 (Stage 5)
Author: Ben Elsmore

26th February, 2026

HB Land
Email: pj@hbland.com.au
CC: ursulaw@urbansolutions.net.au

ATTN: PETER JOHNSON

Dear Sir,

**EARTHWORKS CERTIFICATION - LEVEL 1 INSPECTION & TESTING PROGRAM –
PROPOSED RESIDENTIAL DEVELOPMENT – STAGE 5 - 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 May 2024 and July 2025 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.
- 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 of a sandy clay, gravelly clay and clayey sandy gravel fill won for onsite excavations and was generally free of organics, deleterious material and oversized particles. Due to the nature of the rock fill, some over-sized particles are present within the fill.

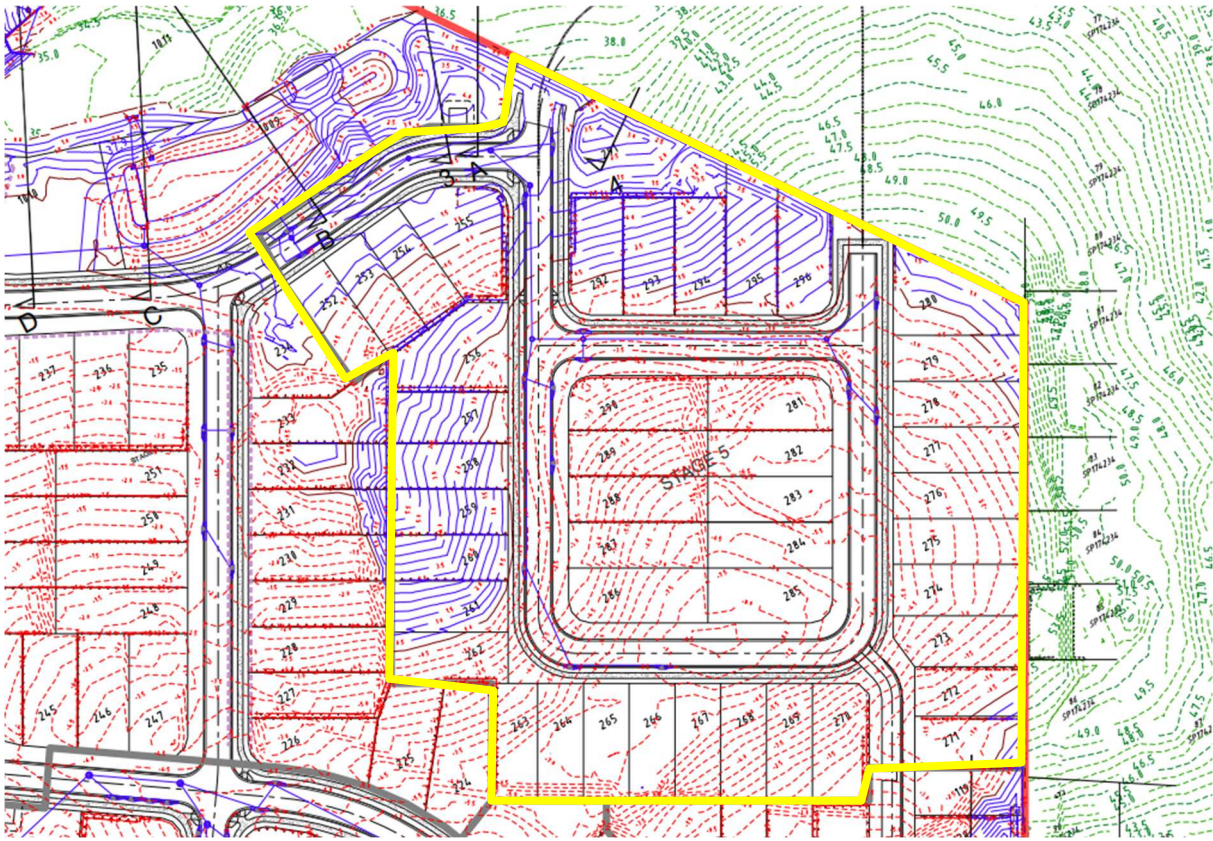
Supervision was generally carried out by Dave Trotman and Ian Masman of our office.

The cut (red) and fill (blue) areas are shown in Figure 1 below.



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FIGURE 1 – CUT FILL PLAN (STAGE 5)


2.0 LEVEL 1 INSPECTION & TESTING PROGRAM

2.1 Project Specifications

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

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

TABLE 1 PROJECT COMPACTION SPECIFICATION

Location	Minimum Dry Density Ratio (%)	Moisture Specification
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).

2.2 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.

2.3 Field Density Testing

Compaction control testing was carried out by nuclear field density testing (test method AS1289 5.8.1). Testing was carried out at a frequency in general accordance with AS 3798-2007, Table 8.1 'Frequency of Field Density Tests'. A total of 23 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 further noted that the moisture variation of several test results is outside specification. Attempts were made to recondition this material during the works to approximate OMC.

The reports are identified by the following report numbers. It should be noted that the attached test reports contain test results from Stage 5 as well as Stage 4. This is due to the bulk earthworks for Stages 4 and 5 being carried out concurrently.

TABLE 2 TEST REPORT SUMMARY

Report Number	Sample Number	Location	Date of Test	Dry Density Ratio (%)	Moisture Ratio (%) ⁽¹⁾
PG-4116-A-60	G24-1423A	527632m E, 6917304m N	23/5/24	94.5 ⁽²⁾	2.0
PG-4116-A-61	G24-1425A	527604m E, 6917348m N	24/5/24	98.0	2.0
PG-4116-A-62	G24-1431B	527583m E, 6917375m N	27/5/24	96.0	3.5
PG-4116-A-63	G24-1435C	527575m E, 6917383m N	28/5/24	98.5	4.0
PG-4116-A-72	G24-1472B	527590m E, 6917350m N	6/6/24	96.0	0.0
	G24-1472C	527612m E, 6917335m N	6/6/24	99.0	2.5
	G24-1472D ⁽³⁾	527632m E, 6917304m N	6/6/24	100.5	2.5
PG-4116-A-74	G24-1474B	527572m E, 6917361m N	7/6/24	96.0	2.0
	G24-1474C	527586m E, 6917344m N	7/6/24	96.0	2.5
PG-4116-A-76	G24-1476A	527558m E, 6917366m N	10/6/24	101.0	2.0
	G24-1476A	527581m E, 6917345m N	10/6/24	100.0	2.5
PG-4116-A-111	G25-2070A	527483m E, 6917344m N	27/2/25	100.0	0.5

Report Number	Sample Number	Location	Date of Test	Dry Density Ratio (%)	Moisture Ratio (%) ⁽¹⁾
	G25-2070B	527476m E, 6917335m N	27/2/25	96.5	1.0
PG-4116-A-112	G25-2074A	527505m E, 6917355m N	28/2/25	96.5	0.0
PG-4116-A-113	G25-2081B	527495m E, 6917340m N	3/3/25	96.5	2.0
PG-4116-A-114	G25-2085A	527505m E, 6917361m N	4/3/25	96.5	2.0
PG-4116-A-115	G25-2276A	527472m E, 6917319m N	11/6/25	95.5	1.5
PG-4116-A-121	G25-2314A	527498m E, 6917337m N	20/6/25	100.0	0.0
	G25-2314B	527474m E, 6917155m N	20/6/25	95.5	2.0
PG-4116-A-122	G25-2328A	527493m E, 6917327m N	26/6/25	100.5	2.5
PG-4116-A-123	G25-2333A	527479m E, 6917296m N	27/6/25	98.5	0.5
PG-4116-A-124	G25-2349A	527471m E, 6917301m N	7/7/25	99.0	2.0
PG-4116-A-125	G25-2354A	527471m E, 6917285m N	9/7/25	98.5	1.0

Notes:

- (1) Positive values are dry of OMC, negative values are wet of OMC.
- (2) Denotes a test failed to achieve the minimum specified density ratio.
- (3) Denotes a retest.

3.0 GENERAL STATEMENT OF COMPLIANCE

Pacific Geotech Pty Ltd certify that the bulk earthworks at the site have 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 for the areas where supervision was undertaken.

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

It should be noted that some oversize material is present within the fill material.

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

SITE PHOTOGRAPHS



Image A – The fill area along the eastern boundary



Image B – Compaction of fill material



Image C – Compaction of fill material



Image D – Compaction of fill material

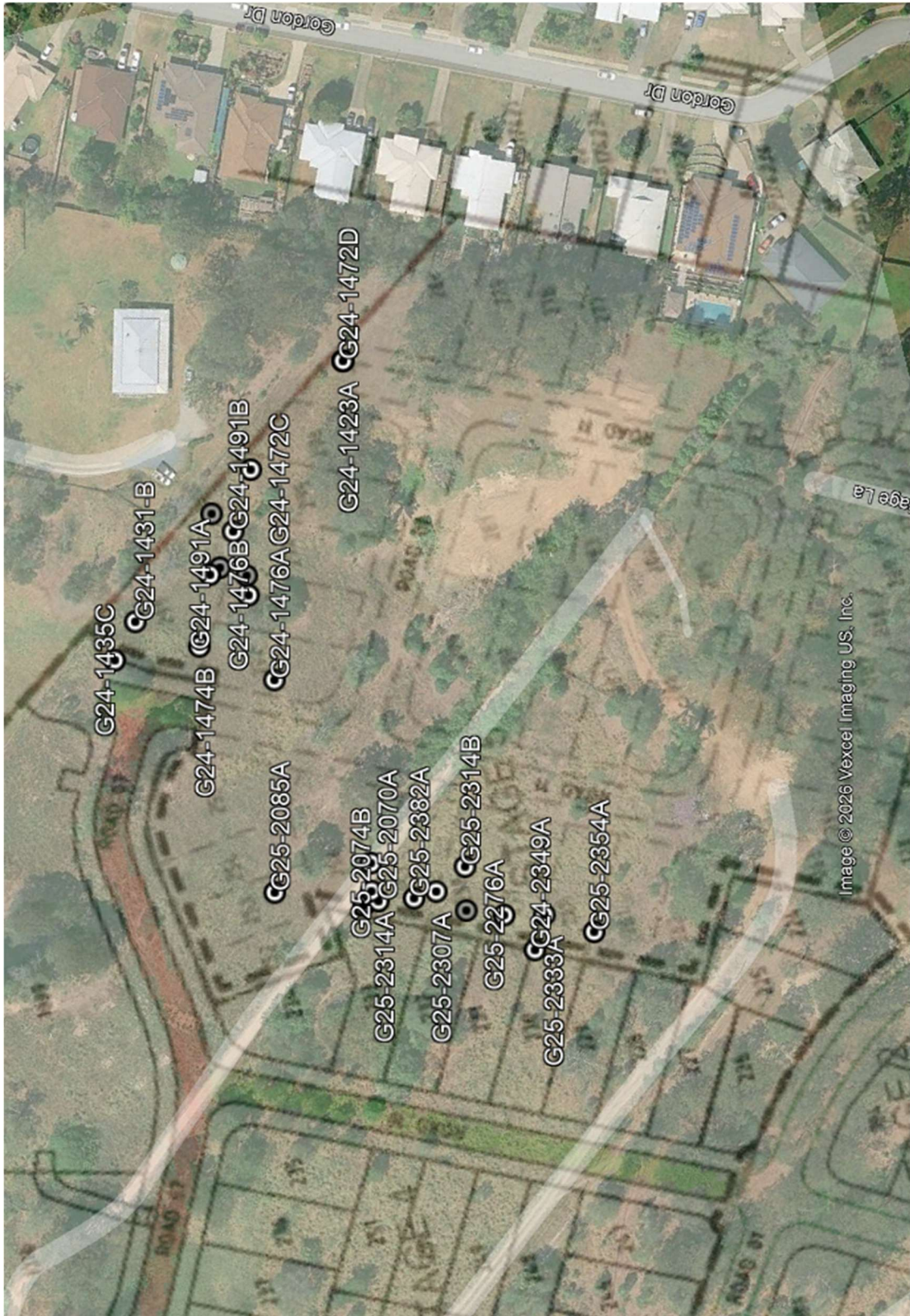


Image E – Trimming of placed fill material



Image F – Compaction of fill material near the finished level

PLOT OF DENSITY TESTS



Material Test Report

Report Number: PG-4116-A-60
Issue Number: 1
Date Issued: 06/06/2024
Client: HB QLD Pty Ltd
c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1423
Date Sampled: 23/05/2024
Dates Tested: 23/05/2024 - 30/05/2024
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

Pacific Geotech Pty Ltd
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Email: info@pacgeo.com.au



Accredited for compliance with ISO/IEC 17025 - Testing



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	G24-1423A		
Client Sample #	**		
Date Tested	23/05/2024		
Time Tested	14:25		
Test Request #/Location	Stage 4 & 5		
Easting	527632		
Northing	6917304		
Elevation (m)	51.9		
Soil Description	Sandy Clay w/ Gravel. Orange Brown		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	7		
Field Wet Density (FWD) t/m ³	2.04		
Field Moisture Content %	10.4		
Field Dry Density (FDD) t/m ³	1.85		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.16		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	94.5		
Compaction Method	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-61
Issue Number: 1
Date Issued: 06/06/2024
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1425
Date Sampled: 24/05/2024
Dates Tested: 24/05/2024 - 30/05/2024
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

Sample Number	G24-1425A		
Client Sample #	**		
Date Tested	24/05/2024		
Time Tested	10:10		
Test Request #/Location	Stage 4 & 5		
Easting	527604		
Northing	6917348		
Elevation (m)	51.0		
Soil Description	Sandy Clay w/ Gravel. Brown		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	7		
Field Wet Density (FWD) t/m ³	2.11		
Field Moisture Content %	9.1		
Field Dry Density (FDD) t/m ³	1.93		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.15		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	98.0		
Compaction Method	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-62
Issue Number: 1
Date Issued: 06/06/2024
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1431
Date Sampled: 27/05/2024
Dates Tested: 27/05/2024 - 31/05/2024
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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Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Dave Trotman

Senior Geotechnician

NATA Accredited Laboratory Number: 21130

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G24-1431A	G24-1431B	
Sample Number	G24-1431A	G24-1431B	
Client Sample #	**	**	
Date Tested	27/05/2024	27/05/2024	
Time Tested	10:05	10:15	
Test Request #/Location	Stage 4 & 5	Stage 4 & 5	
Easting	527553	527583	
Northing	6917419	6917375	
Elevation (m)	38.0	42.4	
Soil Description	Sandy Clay w/ Gravel. Orange Brown	Sandy Clay w/ Gravel. Orange Brown	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	4	14	
Field Wet Density (FWD) t/m ³	2.12	2.05	
Field Moisture Content %	9.6	8.0	
Field Dry Density (FDD) t/m ³	1.93	1.89	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.16	2.14	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	3.5	
Hilf Density Ratio (%)	98.0	96.0	
Compaction Method	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-63
Issue Number: 1
Date Issued: 06/06/2024
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1435
Date Sampled: 28/05/2024
Dates Tested: 28/05/2024 - 03/06/2024
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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Senior Geotechnician

NATA Accredited Laboratory Number: 21130

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G24-1435A	G24-1435B	G24-1435C
Sample Number	G24-1435A	G24-1435B	G24-1435C
Client Sample #	**	**	**
Date Tested	28/05/2024	28/05/2024	28/05/2024
Time Tested	10:10	10:20	13:05
Test Request #/Location	Stage 4 & 5	Stage 4 & 5	Stage 4 & 5
Easting	527547	527537	527575
Northing	6917423	6917394	6917383
Elevation (m)	38.4	39.8	41.1
Soil Description	Sandy Clay w/ Gravel. Orange Brown	Sandy Clay w/ Gravel. Orange Brown	Sandy Clay w/ Gravel. Orange Brown
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	7	10	18
Field Wet Density (FWD) t/m ³	2.22	2.12	2.14
Field Moisture Content %	10.1	9.9	5.6
Field Dry Density (FDD) t/m ³	2.01	1.93	2.02
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.22	2.16	2.17
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	0.0	2.0	4.0
Hilf Density Ratio (%)	100.0	98.0	98.5
Compaction Method	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-72
Issue Number: 1
Date Issued: 18/06/2024
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1472
Date Sampled: 06/06/2024
Dates Tested: 06/06/2024 - 12/06/2024
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

	G24-1472A	G24-1472B	G24-1472C	G24-1472D
Sample Number	G24-1472A	G24-1472B	G24-1472C	G24-1472D
Client Sample #	**	**	**	**
Date Tested	06/06/2024	06/06/2024	06/06/2024	06/06/2024
Time Tested	09:15	09:30	13:15	13:25
Test Request #/Location	Stage 4 & 5	Stage 4 & 5	Stage 4 & 5	Stage 4 & 5 (Retest G24-1423-A)
Easting	527565	527590	527612	527632
Northing	6917369	6917350	6917335	6917304
Elevation (m)	44.6	47.3	50.0	51.9
Soil Description	Sandy Clay. Orange Brown	Sandy Clay. Orange Brown	Sandy Clay w/ Gravel. Brown	Sandy Clay w/ Gravel. Orange 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 (%)	4	2	4	6
Field Wet Density (FWD) t/m ³	2.03	2.04	2.14	2.15
Field Moisture Content %	11.5	12.5	12.6	15.7
Field Dry Density (FDD) t/m ³	1.82	1.82	1.90	1.86
Peak Converted Wet Density t/m ³	**	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.11	2.13	2.17	2.14
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	0.0	0.0	2.5	2.5
Hilf Density Ratio (%)	96.0	96.0	99.0	100.5
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-74
Issue Number: 1
Date Issued: 18/06/2024
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1474
Date Sampled: 07/06/2024
Dates Tested: 07/06/2024 - 14/06/2024
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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Senior Geotechnician

NATA Accredited Laboratory Number: 21130

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G24-1474A	G24-1474B	G24-1474C
Sample Number	G24-1474A	G24-1474B	G24-1474C
Client Sample #	**	**	**
Date Tested	07/06/2024	07/06/2024	07/06/2024
Time Tested	08:45	09:40	09:55
Test Request #/Location	Stage 4 & 5	Stage 4 & 5	Stage 4 & 5
Easting	527563	527572	527586
Northing	6917370	6917361	6917344
Elevation (m)	45.0	46.0	48.2
Soil Description	Sandy Clay. Brown	Sandy Clay. Brown	Sandy Clay. Brown
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	4	6	3
Field Wet Density (FWD) t/m ³	2.00	2.04	2.03
Field Moisture Content %	10.7	10.8	10.7
Field Dry Density (FDD) t/m ³	1.81	1.84	1.84
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.09	2.13	2.12
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.5	2.0	2.5
Hilf Density Ratio (%)	96.0	96.0	96.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: PG-4116-A-76
Issue Number: 1
Date Issued: 18/06/2024
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 1476
Date Sampled: 10/06/2024
Dates Tested: 10/06/2024 - 17/06/2024
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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Senior Geotechnician

NATA Accredited Laboratory Number: 21130

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	G24-1476A	G24-1476B	
Sample Number	G24-1476A	G24-1476B	
Client Sample #	**	**	
Date Tested	10/06/2024	10/06/2024	
Time Tested	09:10	09:20	
Test Request #/Location	Stage 4 & 5	Stage 4 & 5	
Easting	527558	527581	
Northing	6917366	6917345	
Elevation (m)	46.4	48.8	
Soil Description	Sandy Clay w/ Gravel. Brown	Sandy Clay w/ Gravel. Brown	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	13	13	
Field Wet Density (FWD) t/m ³	2.20	2.17	
Field Moisture Content %	9.8	7.8	
Field Dry Density (FDD) t/m ³	2.00	2.02	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.18	2.17	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	2.5	
Hilf Density Ratio (%)	101.0	100.0	
Compaction Method	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-111
Issue Number: 1
Date Issued: 13/03/2025
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2070
Date Sampled: 27/02/2025
Dates Tested: 27/02/2025 - 12/03/2025
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	G25-2070A	G25-2070B	
Client Sample #	**	**	
Date Tested	27/02/2025	27/02/2025	
Time Tested	08:15	10:20	
Test Request #/Location	Stage 5	Stage 5	
Easting	527483	527476	
Northing	6917344	6917335	
Elevation (m)	45.0	46.0	
Soil Description	Clayey Sandy Gravel	Clayey Sandy Gravel	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	37.5	37.5	
Percentage of Wet Oversize (%)	15	16	
Field Wet Density (FWD) t/m ³	2.30	2.26	
Field Moisture Content %	8.9	7.9	
Field Dry Density (FDD) t/m ³	2.11	2.10	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.30	2.34	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	0.5	1.0	
Hilf Density Ratio (%)	100.0	96.5	
Compaction Method	Standard	Standard	
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-112
Issue Number: 1
Date Issued: 13/03/2025
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2074
Date Sampled: 28/02/2025
Dates Tested: 28/02/2025 - 12/03/2025
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	G25-2074A	G25-2074B	
Client Sample #	**	**	
Date Tested	28/02/2025	28/02/2025	
Time Tested	10:05	13:10	
Test Request #/Location	Stage 4	Stage 5	
Easting	527445	527505	
Northing	6917432	6917355	
Elevation (m)	36.5	46.5	
Soil Description	Sandy Clay w/ Gravel	Sandy Clay w/ Gravel	
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 ³	2.01	2.11	
Field Moisture Content %	14.0	11.3	
Field Dry Density (FDD) t/m ³	1.76	1.90	
Peak Converted Wet Density t/m ³	2.12	**	
Adjusted Peak Converted Wet Density t/m ³	**	2.19	
Moisture Variation (Wv) %	-1.0	**	
Adjusted Moisture Variation %	**	0.0	
Hilf Density Ratio (%)	95.0	96.5	
Compaction Method	Standard	Standard	
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-113
Issue Number: 1
Date Issued: 14/03/2025
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2081
Date Sampled: 03/03/2025
Dates Tested: 03/03/2025 - 13/03/2025
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	G25-2081A	G25-2081B	
Client Sample #	**	**	
Date Tested	03/03/2025	03/03/2025	
Time Tested	09:25	13:05	
Test Request #/Location	Stage 4	Stage 5	
Easting	527451	527495	
Northing	6917438	6917340	
Elevation (m)	37.4	47.1	
Soil Description	Clayey Sandy Gravel	Clayey Sandy Gravel	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	37.5	37.5	
Percentage of Wet Oversize (%)	18	15	
Field Wet Density (FWD) t/m ³	2.18	2.21	
Field Moisture Content %	6.1	3.6	
Field Dry Density (FDD) t/m ³	2.06	2.14	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.22	2.29	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	0.0	2.0	
Hilf Density Ratio (%)	98.5	96.5	
Compaction Method	Standard	Standard	
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-114
Issue Number: 1
Date Issued: 14/03/2025
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2085
Date Sampled: 04/03/2025
Dates Tested: 04/03/2025 - 13/03/2025
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	G25-2085A		
Client Sample #	**		
Date Tested	04/03/2025		
Time Tested	13:15		
Test Request #/Location	Stage 5		
Easting	527505		
Northing	6917361		
Elevation (m)	45.5		
Soil Description	Sandy Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	18		
Field Wet Density (FWD) t/m ³	2.09		
Field Moisture Content %	4.5		
Field Dry Density (FDD) t/m ³	2.00		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.16		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	96.5		
Compaction Method	Standard		
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-115
Issue Number: 1
Date Issued: 26/06/2025
Client: HB QLD Pty Ltd
c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2276
Date Sampled: 11/06/2025
Dates Tested: 11/06/2025 - 24/06/2025
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	G25-2276A		
Client Sample #	**		
Date Tested	11/06/2025		
Time Tested	13:15		
Test Request #/Location	Stage 5		
Easting	527472		
Northing	6917319		
Elevation (m)	48.0		
Soil Description	Sandy Clay w/ Gravel		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	6		
Field Wet Density (FWD) t/m ³	2.04		
Field Moisture Content %	11.3		
Field Dry Density (FDD) t/m ³	1.83		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.14		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	1.5		
Hilf Density Ratio (%)	95.5		
Compaction Method	Standard		
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-121
Issue Number: 1
Date Issued: 01/07/2025
Client: HB QLD Pty Ltd
 c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2314
Date Sampled: 20/06/2025 09:00
Dates Tested: 20/06/2025 - 30/06/2025
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: Clayey Sandy Gravel
Material Source: Site

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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	G25-2314A	G25-2314B	
Client Sample #	**	**	
Date Tested	20/06/2025	20/06/2025	
Time Tested	09:00	09:10	
Test Request #/Location	Stage 5 Lot Fill	Stage 4 Lot Fill	
Easting	527498	527474	
Northing	6917337	6917155	
Elevation (m)	49.3	40.9	
Soil Description	Clayey Sandy Gravel	Clayey Sandy Gravel	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	37.5	19.0	
Percentage of Wet Oversize (%)	16	7	
Field Wet Density (FWD) t/m ³	2.29	1.96	
Field Moisture Content %	6.5	9.5	
Field Dry Density (FDD) t/m ³	2.15	1.79	
Peak Converted Wet Density t/m ³	**	**	
Adjusted Peak Converted Wet Density t/m ³	2.29	2.05	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	0.0	2.0	
Hilf Density Ratio (%)	100.0	95.5	
Compaction Method	Standard	Standard	
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-122
Issue Number: 1
Date Issued: 01/07/2025
Client: HB QLD Pty Ltd
c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2328
Date Sampled: 26/06/2025
Dates Tested: 26/06/2025 - 30/06/2025
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	G25-2328A		
Client Sample #	**		
Date Tested	26/06/2025		
Time Tested	08:45		
Test Request #/Location	Stage 5 Lot Fill		
Easting	527493		
Northing	6917327		
Elevation (m)	50.2		
Soil Description	Clayey Sandy Gravel		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	19		
Field Wet Density (FWD) t/m ³	2.26		
Field Moisture Content %	4.7		
Field Dry Density (FDD) t/m ³	2.15		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.25		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.5		
Hilf Density Ratio (%)	100.5		
Compaction Method	Standard		
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-123
Issue Number: 1
Date Issued: 01/07/2025
Client: HB QLD Pty Ltd
c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2333
Date Sampled: 27/06/2025
Dates Tested: 27/06/2025 - 30/06/2025
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	G25-2333A		
Client Sample #	**		
Date Tested	27/06/2025		
Time Tested	09:05		
Test Request #/Location	Stage 5 Lot Fill		
Easting	527479		
Northing	6917296		
Elevation (m)	51.1		
Soil Description	Clayey Sandy Gravel		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	37.5		
Percentage of Wet Oversize (%)	18		
Field Wet Density (FWD) t/m ³	2.19		
Field Moisture Content %	6.8		
Field Dry Density (FDD) t/m ³	2.05		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.22		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	0.5		
Hilf Density Ratio (%)	98.5		
Compaction Method	Standard		
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-124
Issue Number: 1
Date Issued: 14/07/2025
Client: HB QLD Pty Ltd
c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2349
Date Sampled: 07/07/2025
Dates Tested: 07/07/2025 - 11/07/2025
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	G25-2349A		
Client Sample #	**		
Date Tested	07/07/2025		
Time Tested	14:05		
Test Request #/Location	Stage 5 Lot Fill		
Easting	527471		
Northing	6917301		
Elevation (m)	52.1		
Soil Description	Clayey Sandy Gravel		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	37.5		
Percentage of Wet Oversize (%)	17		
Field Wet Density (FWD) t/m ³	2.21		
Field Moisture Content %	7.2		
Field Dry Density (FDD) t/m ³	2.07		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.24		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	99.0		
Compaction Method	Standard		
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-125
Issue Number: 1
Date Issued: 14/07/2025
Client: HB QLD Pty Ltd
c/o 3 Jowett Street, Coomera Qld 4209,
Project Number: PG-4116-A
Project Name: Residential Development
Project Location: Stage 4 & 5 Courtney Drive, Upper Coomera
Work Request: 2354
Date Sampled: 09/07/2025
Dates Tested: 09/07/2025 - 11/07/2025
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	G25-2354A		
Client Sample #	**		
Date Tested	09/07/2025		
Time Tested	13:25		
Test Request #/Location	Stage 5 Lot Fill		
Easting	527471		
Northing	6917285		
Elevation (m)	53.2		
Soil Description	Clayey Sandy Gravel		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	16		
Field Wet Density (FWD) t/m ³	2.23		
Field Moisture Content %	7.8		
Field Dry Density (FDD) t/m ³	2.07		
Peak Converted Wet Density t/m ³	**		
Adjusted Peak Converted Wet Density t/m ³	2.26		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	1.0		
Hilf Density Ratio (%)	98.5		
Compaction Method	Standard		
Remarks	**		

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC