Bartels Run Stage 2
Jackass Flat

Earthworks Supervision Report for
DPJ Civil

Report 25C 0185
May 2025

GTS
GEOTECHNICAL TESTING SERVICES

Bartels Run Stage 2,
Jackass Flat

Earthworks Supervision Report

for

Client

Revision

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25C 0185	27/05/2025	SEH

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APPENDIX

1 INTRODUCTION

DPJ Civil commissioned Geotechnical Testing Services (GTS) to undertake Level 1 Supervision and testing (AS3798-2007) for the earthworks for the residential subdivision at Bartels Run off Lana Drive, Jackass Flat.

Level 1 Testing was generally performed in line with AS3798-2007 “Guidelines on Earthworks for Commercial and Residential Development” and provides inspection of the construction of controlled fill and compaction testing in accordance with AS1289 “Methods of Testing Soils for Engineering Purposes”. The Level 1 testing was undertaken by Geotechnicians with supervision provided by a Geotechnical Engineer from GTS.

2 SCOPE OF WORKS

2.1 AREA OF WORK

Geotechnical Testing Services provided Level 1 inspection and testing of the engineered fill placed in the drain/swale in Lot 32 and Lots 52 to 59.

The depth of fill across the site varied from none to around 400mm at its deepest with the approximate locations shown on the attached site plan. It is noted that sites/areas with 300mm or less were not included in the controlled fill operations.

2.2 PLACEMENT SPECIFICATION

Whilst there were no earthworks specification compiled for this project, the placement of the fill and associated works generally followed the recommendations outlined in AS3798-2007 “Guidelines for Earthworks for Commercial and Residential Developments” and the construction specification.

In summary, the earthworks comply with the following:

- The layers for residential lots are to be compacted to at least 95% of the density ratio in accordance with AS1289 5.1.1 (or 5.7.1), based on Standard compaction.

Therefore, in accordance with Table 8.1 of AS3798-2007, the filling may be considered small scale (less than 1500m^2) and therefore a minimum of 1 test per 1000m^2 or per residential lot are required. The testing was conducted at 1 test per layer per lot which meets the minimum requirement.

3 INSPECTION AND TESTING

Inspection of the excavated base was conducted by a Senior Geotechnical Engineer, and it was observed that the unsuitable material (vegetation, topsoil/silt) had been removed with the base consisting of an extremely weathered Siltstone rock or Silty Clay material of suitable strength.

Level 1 inspection and testing was undertaken by a geotechnician from GTS who nominated the timing and location of the in-situ density tests. The approximate location of each test is recorded on the test reports and attached fill plan.

Laboratory compaction testing was undertaken on a one-to-one basis at our Bendigo laboratory. A summary of the results of the compaction control testing is presented in a table below with the full NATA endorsed test reports included in the Appendix.

4 SUMMARY OF TEST RESULTS

A summary of the test results is included in the following table with full NATA accredited reports included in the Appendix.

Project No.	Sample No.	Test Date	Location	Reduced Level (mm)	Moisture Variation %O.M.C*	Density Ratio %
1	B25-17494A	14/03/2025	Lot 32	FSL	2.5	98.0
2	B25-17523A	19/03/2025	Lot 52	FSL	0.0	102.0
3	B25-17523B	19/03/2025	Lot 53	FSL	0.0	96.0
4	B25-17523C	19/03/2025	Lot 54	FSL	-0.5	95.0
5	B25-17523D	19/03/2025	Lot 55	FSL	0.0	95.5
6	B25-17523E	19/03/2025	Lot 56	FSL	0.0	95.5
7	B25-17523F	19/03/2025	Lot 57	FSL	0.0	96.0
8	B25-17523G	19/03/2025	Lot 58	FSL	0.0	98.5
9	B25-17523H	19/03/2025	Lot 59	FSL	0.0	97.0

* Positive Values = Test is **Dry** of OMC; Negative Values = Test is **Wet** of OMC

5 STATEMENT OF COMPLIANCE

GTS personnel have provided Level 1 inspection and testing services during the placement of material for the filling of Lot 32 and Lots 52 to 59. The placement of fill and construction techniques adopted was observed throughout the project.

Based on observations made by GTS personnel and the results of field and laboratory tests, we consider that the fill has been placed and compacted and is considered to be engineered or controlled fill. Therefore, subject to residential site classifications, the controlled fill material is deemed a suitable founding medium for future residential buildings. It is noted that topsoil material may be spread across the sites following completion of these earthworks and that this topsoil material is not considered controlled fill.

Prepared by

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Reviewed by

Shane Hampton BE (Hons), MIEAust
Principal Geotechnical Engineer

APPENDIX

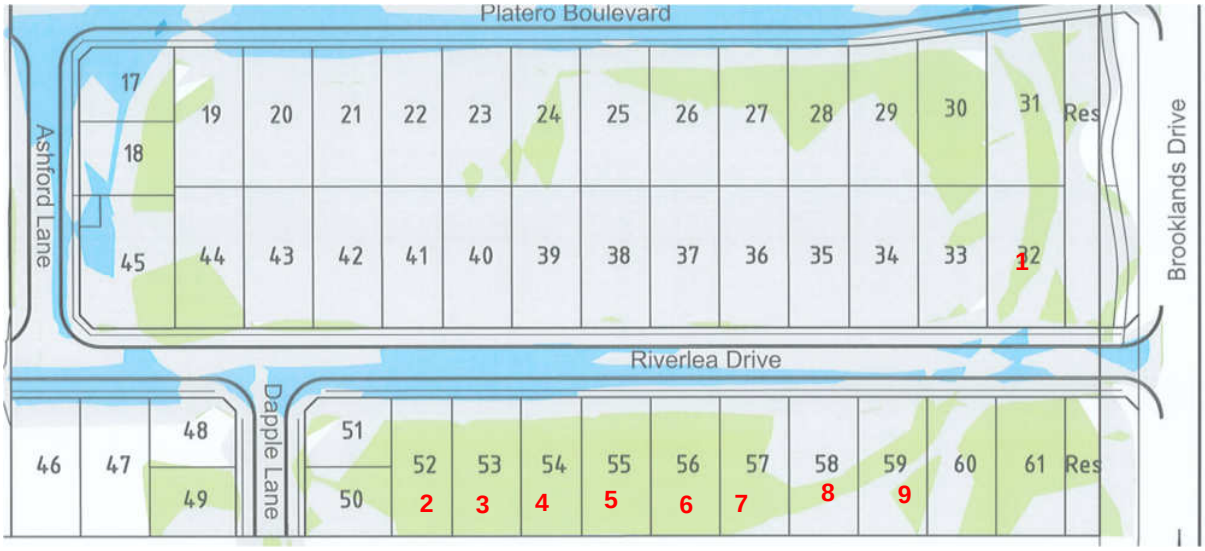
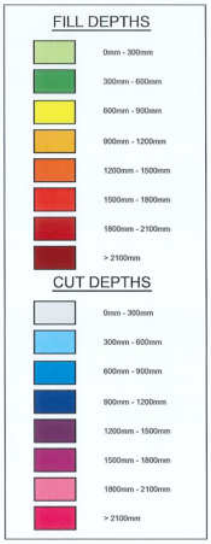


Fig 1 Site Plan



Material Test Report

Report Number: **P232354-5**
Issue Number: 1
Date Issued: 17/03/2025
Client: DPJ Civil Pty Ltd
24 Jewell Court, Bendigo VIC 3550
Project Number: P232354
Project Name: Bartels Run
Project Location: Jackass Flat
Work Request: 17494
Date Sampled: 14/03/2025
Dates Tested: 14/03/2025 - 17/03/2025
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Site Selection: Selected by Client
Location: Jackass Flat - Stage 2
Material Source: Test Location

Geotechnical Testing Services (Southern)
Bendigo Soil and Concrete Testing Laboratory
13 Alstonvale Court East Bendigo VIC 3550
Phone:
Email: tylerw@gts.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

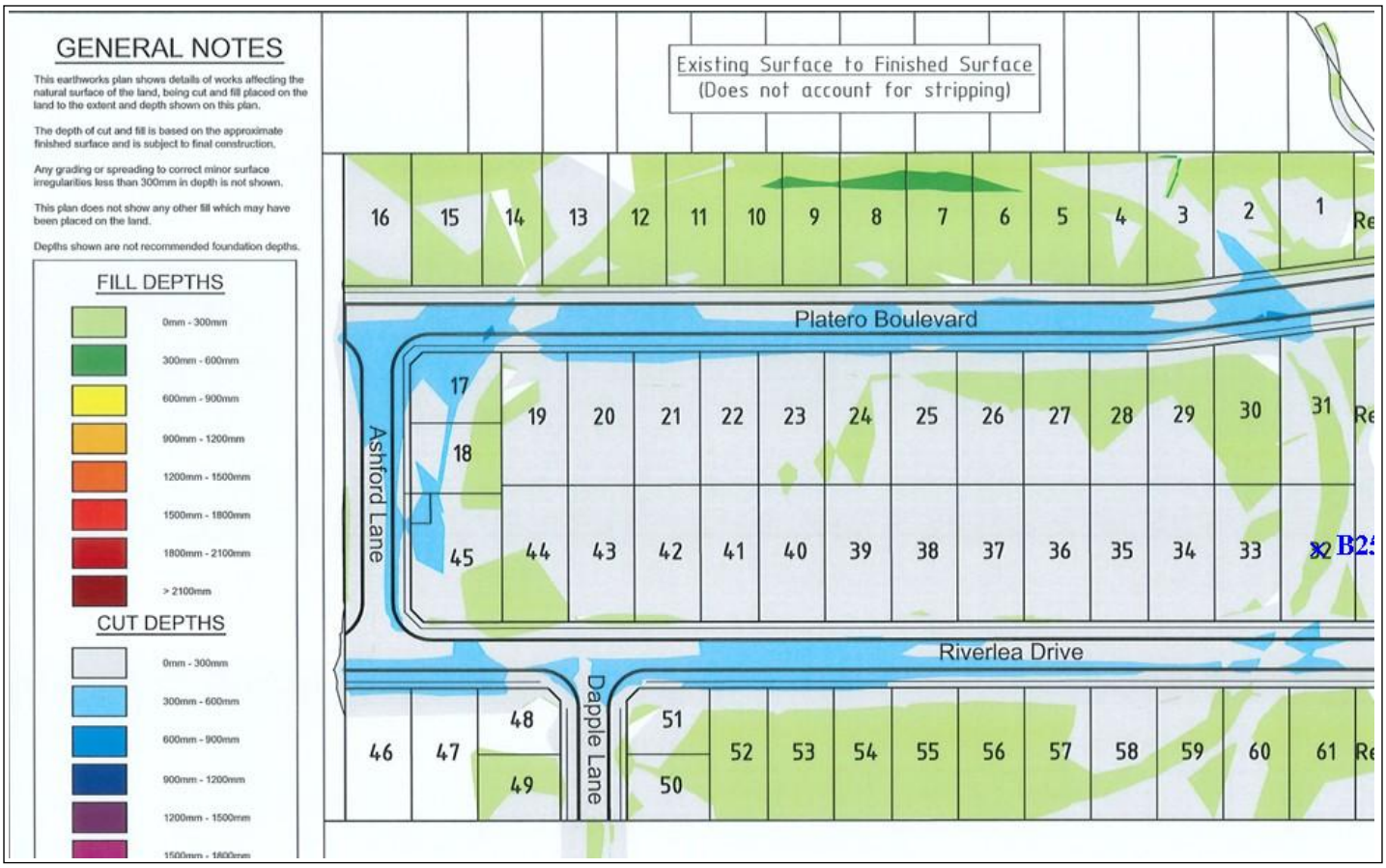
Approved Signatory: Tyler Webb
Snr. Field Technician
NATA Accredited Laboratory Number: 19506

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	B25-17494A		
Date Tested	14/03/2025		
Time Tested	14:01		
Test Request #/Location	House Block		
Chainage (m)	Lot 32		
Location Offset (m)	Centre		
Layer / Reduced Level	FSL		
Thickness of Layer (mm)	200		
Soil Description	Silty Gravelly Clay		
Test Depth (mm)	175		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	8		
Field Wet Density (FWD) t/m^3	2.03		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.07		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.5		
Hilf Density Ratio (%)	**98.0**		
Compaction Method	**Standard**		
Remarks	**		

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

Sample Locations Plan

x - approximate test location



Material Test Report

Report Number: **P232354-6**
Issue Number: 1
Date Issued: 19/03/2025
Client: DPJ Civil Pty Ltd
24 Jewell Court, Bendigo VIC 3550
Project Number: P232354
Project Name: Bartels Run
Project Location: Jackass Flat
Work Request: 17523
Date Sampled: 19/03/2025
Dates Tested: 19/03/2025 - 19/03/2025
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Site Selection: Selected by Client
Location: Stage 2 - Jackass Flat
Material Source: Test Location

Geotechnical Testing Services (Southern)
Bendigo Soil and Concrete Testing Laboratory
13 Alstonvale Court East Bendigo VIC 3550
Phone:
Email: tylerw@gts.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Tyler Webb
Snr. Field Technician
NATA Accredited Laboratory Number: 19506

Compaction Control AS 1289 5.7.1 & 5.8.1				
Sample Number	B25-17523A	B25-17523B	B25-17523C	B25-17523D
Test Number	1	2	3	4
Date Tested	19/03/2025	19/03/2025	19/03/2025	19/03/2025
Time Tested	08:31	08:39	08:43	08:45
Test Request #/Location	Stage 2 House Blocks	Stage 2 House Blocks	Stage 2 House Blocks	Stage 2 House Blocks
Chainage (m)	Lot 52	Lot 53	Lot 54	Lot 55
Location Offset (m)	Rear Centre	Rear Centre	Rear Centre	Rear Centre
Layer / Reduced Level	FSL	FSL	FSL	FSL
Thickness of Layer (mm)	250	250	250	250
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	225	225	225	225
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.10	2.00	2.00	2.02
Field Dry Density (FDD) t/m^3	**	**	**	**
Peak Converted Wet Density t/m^3	2.06	2.09	2.11	2.12
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**96.0**	**95.0**	**95.5**
Compaction Method	**Standard**	**Standard**	**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: **P232354-6**
Issue Number: 1
Date Issued: 19/03/2025
Client: DPJ Civil Pty Ltd
24 Jewell Court, Bendigo VIC 3550
Project Number: P232354
Project Name: Bartels Run
Project Location: Jackass Flat
Work Request: 17523
Date Sampled: 19/03/2025
Dates Tested: 19/03/2025 - 19/03/2025
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Site Selection: Selected by Client
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Material Source: Test Location

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Compaction Control AS 1289 5.7.1 & 5.8.1				
Sample Number	B25-17523E	B25-17523F	B25-17523G	B25-17523H
Test Number	5	6	7	8
Date Tested	19/03/2025	19/03/2025	19/03/2025	19/03/2025
Time Tested	08:47	08:53	08:56	08:59
Test Request #/Location	Stage 2 House Blocks	Stage 2 House Blocks	Stage 2 House Blocks	Stage 2 House Blocks
Chainage (m)	Lot 56	Lot 57	Lot 58	Lot 59
Location Offset (m)	Rear Centre	Rear Centre	Rear Centre	Rear Centre
Layer / Reduced Level	FSL	FSL	FSL	FSL
Thickness of Layer (mm)	250	250	250	250
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	225	225	225	225
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.05	2.04	2.06	2.08
Field Dry Density (FDD) t/m^3	**	**	**	**
Peak Converted Wet Density t/m^3	2.15	2.12	2.09	2.15
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**95.5**	**96.0**	**98.5**	**97.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Remarks	**	**	**	**

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

Sample Locations Plan

x - approximate test location