

**Shadforths Civil Contractors**  
**99 Sandalwood Lane**  
**FOREST GLEN QLD 4556**

Project 676921.00  
6 September 2017  
R.001.docx (Rev 1)  
SK/BWE

Attention: Ed Wilkinson

Email: Ed.Wilkinson@shadcivil.com.au

Dear Sirs

**Report on Earthworks Inspection and Testing**  
**Harmony - Release 2**  
**Palmview**

## 1. Introduction

This report presents the results of the inspection and testing of bulk earthworks for Release 2 as part of the Harmony development at Palmview. The work was undertaken at the request of Shadforths Civil Contractors.

The scope of testing and inspections provided by Douglas Partners Pty Ltd (DP) comprised 'Level 1' geotechnical inspection and testing of bulk earthworks in general accordance with AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments".

This report must be read in conjunction with the attached notes 'About this Inspection Report' and any other explanatory notes.

## 2. Filling

The extent of filling placed at the development over the period 17 July 2017 to 31 July 2017, as covered by this report is shown in the test locations noted in the test report sheets and test location plan, attached to this report. This report covers filling placed on Lots 466 to 472, 477 to 484 and 499 to 547.

In general, the bulk earthworks operations comprised stripping of the existing surface, then placement and compaction of filling material sourced from onsite excavations to bring the ground level up to design surface level required for the works. Due to design changes, the subgrade consisted of previously placed "controlled" filling which is understood to have been inspected and tested under "Level 1" by Wagner Soil Testing. These areas include Lots 466 to 472, Lots 477 to 484 and Lots 503 to 512.

## 2.1 Stripping Inspections and Proof Rolling

Geotechnical personnel from DP inspected the stripped subgrade area prior to the placement of bulk filling. All subgrade areas were stripped of vegetation or other significantly organically contaminated materials exposing the subgrade. The subgrade was test rolled using on site construction equipment (ie. vibrating pad foot compactor, loaded truck) and was considered suitable to accept the placement of filling.

## 2.2 Filling Materials

Filling material typically comprised sandy clay sourced from onsite excavations.

## 2.3 Placement and Testing of Filling

The specification for the bulk filling was for a compaction to a minimum of 95% standard density ratio. No moisture range was specified.

Filling materials were placed on site by conventional earthmoving equipment, spread out in uniform layers and then compacted using a vibrating roller.

Observations were made on site by the supervising geotechnical personnel from DP who were present on site during the placement of filling over the period 17 July 2017 to 31 July 2017.

Following the completion of compaction, where possible each layer was tested using the nuclear gauge method (AS1289.5.8.1 "Methods of Testing Soils for Engineering Purposes") at the testing frequency nominated in AS3798-2007 and the project requirements. The relative compaction was determined using the method of AS1289.5.7.1.

A total of 43 density tests were carried out by DP on filling placed over the period 17 July 2017 to 31 July 2017. A summary of the testing is presented in Table 1.

**Table 1: Summary of Density Testing**

	<b>Compaction</b>	<b>Moisture</b>
Specification	95% Std.	-
No. of Tests	42	42
Range	95.0% to 103.0%	3.5% wet to 3.0% dry of OMC
Mean Average	98.9%	0.1% dry of OMC
No. of Tests Outside Specification	0	-

Note: Std. –Standard compaction

### 3. Comments

DP undertook inspection and earthworks testing in general accordance with a Level 1 standard as defined in AS3798-2007 “Guidelines on Earthworks for Commercial and Residential Developments”.

It is considered that the placement and compaction of the filling over the period 17 July 2017 to 31 July 2017 for Release 2 as part of the Harmony development at Palmview has been carried out in general accordance with the requirements of the specification. DP does not undertake to guarantee the work of the contractors nor relieve their responsibility to produce a completed product conforming to the requirements of the specification.

For building on the controlled filled areas, consideration should be given by the user to the following:

- possible disruption of the compacted filling by the installation of services;
- the possibility that additional filling has been placed before and after the dates of field density tests or at times when DP has not been notified that filling operations are in progress;
- adequate containment of the filled areas; and
- the suitability of the filled land to support structures of various types without excessive deflection, in particular, the shrink-swell properties of the filling and natural soils must be considered in foundation/footing slab design and in detailing future structures; and
- variation in filling depth.

### 4. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for Release 2 as part of the Harmony development at Palmview. This report is provided for the exclusive use of Shadforths Civil Contractors for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the subsurface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Subsurface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP’s field testing has been completed.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

Please contact the undersigned if you have any questions on this matter.

Yours faithfully

**Douglas Partners Pty Ltd**



**Sean Kelly**  
Geotechnical Engineer

Reviewed by



**Brett Egen (RPEQ 8597)**  
Senior Associate

Attachments:      About this Inspection Report  
                         Laboratory Test Results  
                         Test Location Plans

# About this Inspection Report

# Douglas Partners



## Introduction

These notes are provided to amplify DP's inspection report in regard to the limitations of carrying out inspection work. Not all notes are necessarily relevant to this report.

## Standards

This inspection report has been prepared by qualified personnel to current engineering standards of interpretation and analysis.

## Copyright and Limits of Use

This inspection report is the property of DP and is provided for the exclusive use of the client for the specific project and purpose as described in the report. It should not be used by a third party for any purpose other than to confirm that the construction works addressed in the report have been inspected as described. Use of the inspection report is limited in accordance with the Conditions of Engagement for the commission.

DP does not undertake to guarantee the works of the contractors or relieve them of their responsibility to produce a completed product conforming to the design.

## Reports

This inspection report may include advice or opinion that is based on engineering and/or geological interpretation, information provided by the client or the client's agent, and information gained from:

- an investigation report for the project (if available to DP);
- inspection of the work, exposed ground conditions, excavation spoil and performance of excavating equipment while DP was on site;
- investigation and testing that was carried out during the site inspection;
- anecdotal information provided by authoritative site personnel; and

- DP's experience and knowledge of local geology.

Such information may be limited by the frequency of any inspection or testing that was able to be practically carried out, including possible site or cost constraints imposed by the client/contractor(s). For these reasons, the reliability of this inspection report is limited by the scope of information on which it relies.

Every care is taken with the inspection report as it relates to interpretation of subsurface conditions and any recommendations or suggestions for construction or design. However, DP cannot anticipate or assume responsibility for:

- unexpected variations in subsurface conditions that are not evident from the inspection; and
- the actions of contractors responding to commercial pressures.

Should these issues occur, then additional advice should be sought from DP and, if required, amendments made.

This inspection report must be read in conjunction with any attached information. This inspection report should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions from review by others of this inspection report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this inspection report.

# Compaction Control Test Report



Approved Signatory: Shae Harry

Nata Accredited Laboratory Number: 828

**Report Number:** 676921.00-1  
**Issue Number:** 1  
**Date Issued:** 03/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 985  
**Date Sampled:** 17/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-985A	17-985B	17-985C
Test Number	1	2	3
Date Tested	17/07/2017	17/07/2017	17/07/2017
Time Tested	09:00	09:05	09:10
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505853	505819	505803
Northing	7042730	7042743	7042750
Elevation (m)	R.L. 14.081	R.L. 13.94	R.L. 13.8
Layer / Reduced Level	**	**	**
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.01	2.02	2.12
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.04	2.06	2.16
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>99.0</b>	<b>98.0</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Shae Harry

Nata Accredited Laboratory Number: 828

**Report Number:** 676921.00-2  
**Issue Number:** 1  
**Date Issued:** 03/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 996  
**Date Sampled:** 18/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-996A	17-996B	17-996C
Test Number	4	5	6
Date Tested	18/07/2017	18/07/2017	18/07/2017
Time Tested	08:30	08:35	08:40
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505853	505823	505799
Northing	7042740	7042739	7042752
Elevation (m)	R.L. 14.295	R.L. 14.267	R.L. 14.3
Layer / Reduced Level	**	**	**
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.12	2.09	2.12
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.14	2.10	2.07
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>99.5</b>	<b>100.0</b>	<b>102.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-3  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1005  
**Date Sampled:** 19/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-1005A	17-1005B	17-1005C
Test Number	7	8	9
Date Tested	19/07/2017	19/07/2017	19/07/2017
Time Tested	13:00	13:10	13:20
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505791	505786	505805
Northing	7042753	7042730	7042742
Elevation (m)	**	**	**
Layer / Reduced Level	R.L. 14.08 m	R.L. 14.26 m	R.L. 14.40 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0.0	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.01	2.15	2.10
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.10	2.17	2.16
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-2.0	0.0	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>95.5</b>	<b>99.5</b>	<b>97.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-4  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1014  
**Date Sampled:** 20/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1				
Sample Number	17-1014A	17-1014B	17-1014C	17-1014D
Test Number	10	11	12	13
Date Tested	20/07/2017	20/07/2017	20/07/2017	20/07/2017
Time Tested	08:25	08:35	08:50	08:55
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505788	505771	505812	505839
Northing	7042721	7042676	7042786	7042803
Elevation (m)	**	**	**	**
Layer / Reduced Level	R.L. 14.467 m	R.L. 14.287 m	R.L. 13.42 m	R.L. 13.32 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill	Onsite Fill
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 (%)	0.0	0.0	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.14	2.18	2.01	2.07
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.15	2.12	2.08	2.16
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	-0.5	0.5	-0.5	-2.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>99.5</b>	<b>102.5</b>	<b>96.5</b>	<b>95.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-5  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1024  
**Date Sampled:** 21/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1				
Sample Number	17-1024A	17-1024B	17-1024C	17-1024D
Test Number	14	15	16	17
Date Tested	21/07/2017	21/07/2017	21/07/2017	21/07/2017
Time Tested	13:00	13:10	13:20	13:30
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505905	505861	505842	505767
Northing	7042726	7042731	7042745	7042677
Elevation (m)	**	**	**	**
Layer / Reduced Level	R.L. 13.5 m	R.L. 13.8 m	R.L. 13.7 m	R.L. 14.6 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill	Onsite Fill
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 (%)	0.0	**	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.10	2.10	2.10	2.08
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.08	2.04	2.07	2.08
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	2.5	0.5	2.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>101.0</b>	<b>103.0</b>	<b>101.0</b>	<b>100.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-6  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1031  
**Date Sampled:** 24/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-1031A	17-1031B	17-1031C
Test Number	18	19	20
Date Tested	24/07/2017	24/07/2017	24/07/2017
Time Tested	11:00	11:10	11:20
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505858	505824	505793
Northing	7042708	7042709	7042712
Elevation (m)	**	**	**
Layer / Reduced Level	R.L. 13.7 m	R.L. 14.2 m	R.L. 14.5 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.09	2.14	2.03
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.08	2.08	1.99
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-1.0	1.0	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>100.0</b>	<b>103.0</b>	<b>102.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-7  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1043  
**Date Sampled:** 25/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-1043A	17-1043B	17-1043C
Test Number	21	22	23
Date Tested	25/07/2017	25/07/2017	25/07/2017
Time Tested	14:10	14:15	14:20
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505920	505925	505929
Northing	7042793	7042812	7042834
Elevation (m)	**	**	**
Layer / Reduced Level	R.L. 13.911 m	R.L. 13.904 m	R.L. 13.898 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0.0	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.08	2.03	2.10
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.17	2.11	2.16
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-1.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>96.0</b>	<b>96.0</b>	<b>97.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-8  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1044  
**Date Sampled:** 25/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-1044A	17-1044B	17-1044C
Test Number	24	25	26
Date Tested	25/07/2017	25/07/2017	25/07/2017
Time Tested	10:00	10:10	10:20
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505815	505834	505853
Northing	7042825	7042827	7042825
Elevation (m)	**	**	**
Layer / Reduced Level	R.L. 13.54 m	R.L. 13.32 m	R.L. 13.36 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.15	2.08	1.97
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.15	2.15	2.08
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>100.0</b>	<b>97.0</b>	<b>95.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Shae Harry

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-9  
**Issue Number:** 2 - This version supercedes all previous issues  
**Date Issued:** 07/09/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1054  
**Date Sampled:** 26/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	17-1054A	17-1054B	17-1054C
Test Number	27	28	29
Date Tested	26/07/2017	26/07/2017	26/07/2017
Time Tested	11:10	11:15	11:20
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505920	505922	505895
Northing	7042792	7042821	7042811
Elevation (m)	**	**	**
Layer / Reduced Level	R.L.13.160 m	R.L.13.178 m	R.L.13.057 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0.0	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.11	2.03	2.12
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.21	2.10	2.12
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	0.0	-3.5	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>95.5</b>	<b>97.0</b>	<b>100.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-10  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1065  
**Date Sampled:** 27/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1					
Sample Number	17-1065A	17-1065B	17-1065C	17-1065D	17-1065E
Test Number	31	32	33	34	35
Date Tested	27/07/2017	27/07/2017	27/07/2017	27/07/2017	27/07/2017
Time Tested	09:45	09:50	13:10	13:15	13:20
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505892	505890	505795	505785	505790
Northing	7042652	7042626	7042647	7042621	7042585
Elevation (m)	**	**	**	**	**
Layer / Reduced Level	R.L. 14.0 m	R.L. 14.0 m	R.L. 14.7 m	R.L. 14.9 m	R.L. 15.2 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill	Onsite Fill	Onsite Fill
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0.0	**	0.0	**	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.07	2.10	2.10	2.11	2.06
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.07	2.17	2.08	2.14	2.15
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**
Moisture Variation (Wv) %	3.0	-0.5	0.5	0.0	-1.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	<b>100.0</b>	<b>96.5</b>	<b>101.0</b>	<b>98.5</b>	<b>96.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Compaction Control Test Report



Approved Signatory: Martin Cook

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-11  
**Issue Number:** 1  
**Date Issued:** 21/08/2017  
**Client:** Shadforth's Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1077  
**Date Sampled:** 28/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1				
Sample Number	17-1077A	17-1077B	17-1077C	17-1077D
Test Number	36	37	38	39
Date Tested	28/07/2017	28/07/2017	28/07/2017	28/07/2017
Time Tested	10:15	10:20	10:25	10:30
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505882	505892	505920	505916
Northing	7042781	7042830	7042829	7042783
Elevation (m)	**	**	**	**
Layer / Reduced Level	R.L. 13.88 m	R.L. 13.28 m	R.L. 13.30 m	R.L. 13.68 m
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill	Onsite Fill
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 (%)	0.0	0.0	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.17	2.18	2.04
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.01	2.18	2.21	2.06
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	1.5	1.0	-1.0	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>100.5</b>	<b>99.5</b>	<b>98.5</b>	<b>99.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Compaction Control Test Report



Approved Signatory: Shae Harry

NATA Accredited Laboratory Number: 828

**Report Number:** 676921.00-12  
**Issue Number:** 1  
**Date Issued:** 29/08/2017  
**Client:** Shadforths Civil Contractors  
 99 Sandalwood Lane, Forest Glen QLD 4556  
**Contact:** Ed Wilkinson  
**Project Number:** 676921.00  
**Project Name:** Proposed Subdivision  
**Project Location:** Harmony - Release 2, Palmview  
**Work Request:** 1086  
**Date Sampled:** 31/07/2017  
**Sampling Method:** AS1289 1.2.1 6.4 - Sampling from layers in earthworks or pavement - uncompacted/compacted  
**Specification:** Minimum 95% Standard Hilf Density Ratio  
**Material:** Onsite Fill

Compaction Control AS 1289 5.7.1 & 5.8.1				
Sample Number	17-1086A	17-1086B	17-1086C	17-1086D
Test Number	40	41	42	43
Date Tested	31/07/2017	31/07/2017	31/07/2017	31/07/2017
Time Tested	09:15	09:20	09:25	09:30
Test Request #/Location	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks	Bulk Earthworks
Easting	505844	505849	505822	505811
Northing	7042781	7042815	7042821	702790
Elevation (m)	R.L. 14.14 m	R.L. 13.87 m	R.L. 14.26 m	R.L. 14.37 m
Layer / Reduced Level	**	**	**	**
Soil Description	Onsite Fill	Onsite Fill	Onsite Fill	Onsite Fill
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 (%)	0.0	0.0	0.0	0.0
Field Wet Density (FWD) t/m <sup>3</sup>	2.14	2.06	2.00	2.00
Field Dry Density (FDD) t/m <sup>3</sup>	**	**	**	**
Peak Converted Wet Density t/m <sup>3</sup>	2.18	2.08	1.98	2.04
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	0.0	2.0	0.0	1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>98.0</b>	<b>98.5</b>	<b>101.0</b>	<b>98.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC

