

Level 1 Report AS3798

Client: Shadforth Civil
Project: Residential Development – Village Green Stage 5
Address: Peter Crosby Way, Palmview
Job No: J20/70



Version	Date	Author	Initials	Reviewer	Initials
1	4/3/2021	LW	<i>[Signature]</i>	DW	<i>[Signature]</i>

Form No: W169 – Version 1 (29/05/18)



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1.0 Introduction

Wagner Soil Testing has recently completed a Level One Overview of Earthworks, in accordance with the requirements of **AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”** for Residential Development – Village Green Stage 5, Palmview Qld.

Controlled fill (as defined in AS 2870) was placed by Shadforth Civil. Stripping instructions, proof rolling, and compaction control testing was carried out by Wagner Soil Testing (on a fulltime basis) during all earthwork’s operations. Our onsite supervision component excludes assessments of fill quality and engineering properties that are outside the requirements of AS3798 – 2007, including CBR values and soil reactivity.

2.0 Site Description

The site is located at Peter Crosby Way, Palmview Qld. The general location of the site is shown in the attached site plans (Appendix 1). The site is bound by ongoing residential development & rural lands.

3.0 Foundation Preparation

3.1 Site Stripping

Vegetation, topsoil, and organic rich materials were stripped and stockpiled onsite prior to the commencement of filling operations. As a safety factor several test pits were excavated in the proposed fill area to assess subsurface conditions & no significant issues were noted during this phase.

3.2 Proof Rolling

All stripped areas were proof rolled prior to any fill placement. Any compressible areas with apparent movement were excavated to a firm base before any fill being placed.

4.0 Controlled Filling

Fill materials (onsite) were compacted using a medium pad foot in layers not exceeding 0.3m loose. The natural ground in the areas of filling generally comprised of Silty Sands (SM). The fill material used was generally as above with some Sandy Clays (CI – CH). Moisture contents of all fill placed was monitored by Wagner Soil Testing. Total volumes of fill reached 10,066m³.

5.0 Compaction Control Testing

Compaction Control Testing was carried out by Wagner Soil Testing. Testing was carried out in accordance with the requirements of **AS3798 Table 5.1 (Minimum Relative Compaction)** and **Table 8.1 (Frequency of Field Density Tests)**. During the works, thirty-two (32) Field Dry Densities were carried out on fill materials together with Dynamic Cone Penetrometers (DCP's) over the filled zones periodically & at the completion of earthworks operations to help quantify bearing capacities.

6.0 Field Density Results

All Nuclear Field Densities carried out on the fill indicated Density Ratios greater than the specified requirement of 95% (standard compaction) & **AS3798 Table 5.1**.

7.0 Report on Filling Operations

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.

8.0 Notes

Certified / Controlled (Level 1) Fill is only an assurance of its density. There are sites where long-term consolidations of fill can occur, unrelated to its actual density. Sites where fill has been placed over inferior material and sites where the depth of controlled fill varies dramatically over short distances are sites where differential consolidations must be considered. Although all Field Densities carried out reached density ratios greater than 95% as required, some material still may have bearing ratios below 100kPa as per AS2870 – Residential Slabs & Footings depending on material composition, and unfavorable site classifications and low subgrade design strengths still may be encountered.

All compacted fill is subject to secondary (creep) settlement, which is relational to the depth of the fill. Estimated secondary settlement may be of the order of 1% to 2% of the total fill height over 15 years. There is a possibility that additional fill has been placed after the date of the last field density test or at times when Wagner Soil Testing has not been notified that filling operations are in progress. The installation of services may cause disruption of the compacted fill.

Unless otherwise stated, Level 1 Certification does not address trench backfill operations, batter slope stability, retaining wall construction, global stability analysis, acid sulfate testing and or management. The “supervision” component of this Level 1 Report is not NATA endorsed. Wagner Soil Testing must be contacted if any site levels are modified whatsoever. It is the client’s responsibility to maintain site drainage after the issue of this report.

A full geotechnical site investigation / classification and foundation design for the specific ground conditions should be carried out by suitably qualified or experienced personnel prior to building. This service can be provided, if required, by contacting Wagner Soil Testing.

Constraints:

This report was produced for the sole use of Shadforth Civil. This report should not be used by or depended upon for other projects or purposes on the same or other projects or by a third party. In the preparation of this report Wagner Soil Testing has relied upon information provided by the client and or their agents.

The results provided in this report are indicative of the subsurface conditions on the site only at the specific sampling or testing locations, and then only to the depths investigated along with the time the work was carried out. It is known that subsurface conditions can suddenly change due to irregular geological processes and as a result of human influences. Such changes may occur after Wagner Soil Testing’s field testing has been completed.

Certain ground conditions and the materials behavior observed or contained at the test locations may alter from those which may be encountered elsewhere on the site. Should variations in subsurface conditions be encountered, then additional advice should be sought from Wagner Soil Testing and if required, amendments made.

Wagner Soil Testing cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome, or conclusion given in this report.

To establish a geotechnical model as per AS1726-2017-5.2 we require extra testing. No differential settlement estimates have been calculated for this site.

For further technical support regarding this Geotechnical Report please contact Mr. Dean Wagner of Wagner Soil Testing.



Dean Wagner
Managing Director
Wagner Soil Testing



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Appendix 1

General Layout Plan

CONSTRUCTION

MATERIALS

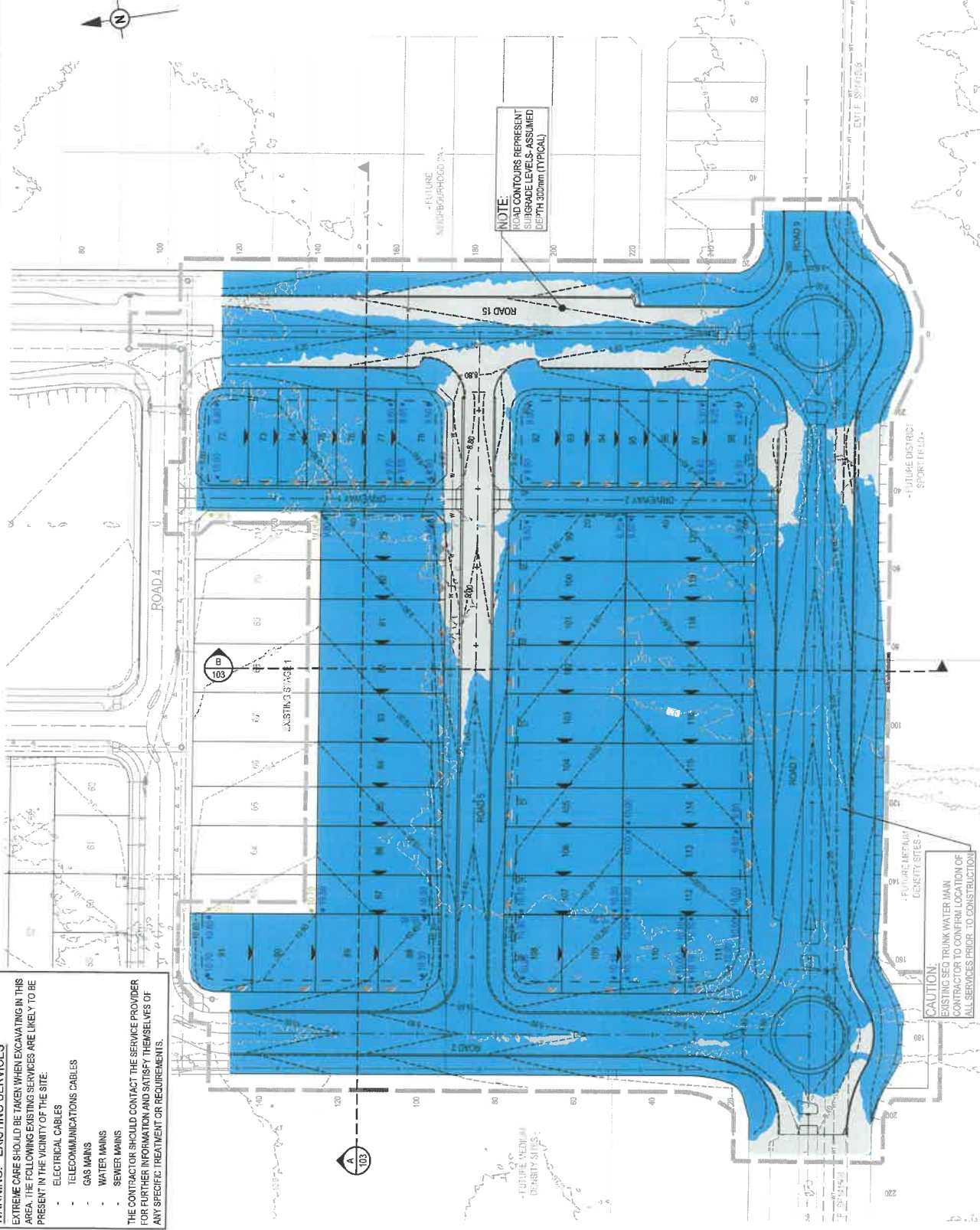
TESTING

WARNING! - EXISTING SERVICES
 EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE.

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

- LEGEND**
- PROPOSED STAGE BOUNDARY
 - PROPOSED SURFACE CONTOUR
 - EXISTING SURFACE CONTOUR
 - PROPOSED EARTHWORKS PAD SETBACK LINE
 - PROPOSED FINISHED SURFACE LEVEL (FSL) (INCLUDES TOPSOIL PLACEMENT)
 - EXISTING STAGE FINISHED SURFACE LEVEL
 - PROPOSED AREA OF CUT
 - PROPOSED AREA OF FILL
 - INDICATIVE DRIVEWAY LOCATIONS
 - ZERO LOT BOUNDARY
 - EXISTING STORMWATER DRAINAGE PIPE
 - EXISTING ROOFWATER DRAINAGE PIPE
 - EXISTING SEWERAGE MAIN
 - EXISTING WATER MAIN
 - EXISTING SEC TRUNK WATER MAIN
 - EXISTING WATER CONDUIT
 - EXISTING DRAIN



REV	DATE	DESCRIPTION	BY	CHECKED	DATE	REVISION DETAILS
A	15/10/20	ISSUED FOR CONSTRUCTION	MH			
<p>ISSUED FOR CONSTRUCTION</p> <p>APPROVED: RYAN ASHWORTH RPEQ 19874 <i>Ryan Ashworth</i> 120, AND OR BEHALF OF PEAKURBAN LTD.</p>						
<p>SCALE: 1:500</p> <p>1500 1000 500 0 500 1000 1500</p> <p>20 A1 A3</p>						
<p>PEAKURBAN DEVELOPMENT CONSULTANTS & ARCHITECTS 600 RIVERVIEW DRIVE, SUITE 101, AUCKLAND</p>						
<p>PROJECT TITLE: PROPOSED RESIDENTIAL DEVELOPMENT, PALMVIEW</p> <p>PROJECT NO.: 20-0014</p> <p>REVISION NO.: 102</p> <p>REVISION: A</p>						



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Appendix 2 Field Density Reports

CONSTRUCTION

MATERIALS


TESTING

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	16/09/2020
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	11	Page	1 of 2
		Order No.	BJ

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/13899	W20/13900	W20/13901
Test Location	Lot 107	Lot 112	Lot 114
	North Centre	South Centre	Centre
Layer / Elevation	Allotment	Allotment	Allotment
Material Source	GST	GST	GST
Depth Tested	150	150	150
Layer Thickness	GST	GST	GST
Date Tested	16-Sep-20	16-Sep-20	16-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.004	1.984	2.001
Insitu Moisture Content (%)	18.4	19.1	18.7
PCWD (t/m ³)	2.060	2.050	2.063
Peak Added Moisture (%)	+2.4	+1.9	+2.3
Moisture Correction (%)	+2.7	+2.1	+2.5
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	97.3	96.8	97.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35569		




Dean Wagner - Authorised Signatory
Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing


Date 17/11/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	16/09/2020
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	12	Page	2 of 2
		Order No.	BJ

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/13902	W20/13903	W20/13904
Test Location	Lot 84	Lot 101	Lot 119
	Centre	North Centre	North Centre
Layer / Elevation	Allotment	Allotment	Allotment
Material Source	GST	GST	GST
Depth Tested	150	150	150
Layer Thickness	GST	GST	GST
Date Tested	16-Sep-20	16-Sep-20	16-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.011	2.020	2.006
Insitu Moisture Content (%)	17.4	16.8	17.5
PCWD (t/m ³)	2.050	2.036	2.030
Peak Added Moisture (%)	+2.2	+3.8	+2.3
Moisture Correction (%)	+2.5	+4.1	+2.6
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	98.1	99.2	98.8
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35569		




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Date 17/11/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	16-Sep-20
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	13	Page	1 of 2
		Order No.	BJ

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/13905	W20/13906	W20/13907
Test Location	Lots 88/89	Lots 85/86	Lots 83/84
	Centre	North Centre	South Centre
	0.2m Below FL	0.3m Below FL	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	150	150	150
Layer Thickness	300	300	300
Date Tested	16-Sep-20	16-Sep-20	16-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.150	2.167	2.172
Insitu Moisture Content (%)	8.7	7.4	7.0
PCWD (t/m ³)	2.178	2.139	2.122
Peak Added Moisture (%)	+3.7	+3.8	+4.2
Moisture Correction (%)	+3.9	+4.1	+4.5
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	98.7	101.3	102.4
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35569		




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Date 21/10/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	16-Sep-20
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	14	Page	2 of 2
		Order No.	BJ

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/13908	W20/13909	W20/13910
Test Location	Lots 81/82	Lots 79/80	Lots 75/76
	Bndry - North Centre	Bndry - South Centre	Centre of Boundary
	0.2m Below FL	0.2m Below FL	0.3m Below FL
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	150	150	150
Layer Thickness	300	300	300
Date Tested	16-Sep-20	16-Sep-20	16-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.122	2.124	2.122
Insitu Moisture Content (%)	7.6	8.0	9.1
PCWD (t/m ³)	2.078	2.084	2.107
Peak Added Moisture (%)	+4.3	+4.3	+3.7
Moisture Correction (%)	+4.6	+4.6	+4.0
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	102.1	101.9	100.7
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35569		




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Date 21/10/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	22/09/2020
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JJ
Report Number	15	Page	1 of 3
		Order No.	Sean T

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/14268	W20/14269	W20/14270
Test Location	Lot Boundary 72/73	Lot Boundary 89/90	Lot Boundary 109/110
	Centre Lot	Centre Lot	Centre Lot
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	150	150	150
Layer Thickness	300	300	300
Date Tested	22-Sep-20	22-Sep-20	22-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.092	2.116	2.199
Insitu Moisture Content (%)	7.2	7.4	8.0
PCWD (t/m ³)	2.130	2.118	2.104
Peak Added Moisture (%)	+3.7	+4.4	+3.8
Moisture Correction (%)	+4.0	+4.7	+4.1
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	98.2	99.9	100.7
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35578		




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Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing


Date 26/11/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	22/09/2020
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JJ
Report Number	16	Page	2 of 3
		Order No.	Sean T

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/14271	W20/14272	W20/14273
Test Location	Lot Boundary 108/107	Lot Boundary 106/113	Lot Boundary 113/114
	Centre Lot	Centre Lot	Centre Lot
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	150	150	150
Layer Thickness	300	300	300
Date Tested	22-Sep-20	22-Sep-20	22-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.200	2.142	2.125
Insitu Moisture Content (%)	12.0	10.2	8.3
PCWD (t/m ³)	2.144	2.123	2.117
Peak Added Moisture (%)	+1.7	+2.4	+3.8
Moisture Correction (%)	+1.9	+2.6	+4.1
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	102.6	100.9	100.4
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35578		




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Date 26/11/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	22/09/2020
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JJ
Report Number	17	Page	3 of 3
		Order No.	Sean T

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W20/14274	W20/14275	W20/14276
Test Location	Lot Boundary 101/102	Lot Boundary 100/119	Lot113/114
	Centre Lot	Centre Lot	South East Corner
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	150	150	150
Layer Thickness	300	300	300
Date Tested	22-Sep-20	22-Sep-20	22-Sep-20
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.145	2.042	1.981
Insitu Moisture Content (%)	9.2	8.4	9.6
PCWD (t/m ³)	2.115	2.055	2.061
Peak Added Moisture (%)	+3.7	+4.3	+3.7
Moisture Correction (%)	+4.0	+4.7	+4.0
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	101.4	97.9	96.1
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #35578		




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Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing


Date 26/11/2020

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	13/01/2021
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	36A	Page	1 of 4
		Order No.	Hayden

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W21/103	W21/104	W21/105
Test Location	Lot 74	Lots 92/93	Lots 96/97
	Centre	Centre of Boundary	Centre of Boundary
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	275	275	275
Layer Thickness	300	300	300
Date Tested	13-Jan-21	13-Jan-21	13-Jan-21
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	2.019	2.170	1.928
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.051	2.098	1.973
Peak Added Moisture (%)	+4.3	+3.7	+1.8
Moisture Correction (%)	+4.7	+4.0	+2.1
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	98.4	103.4	97.7
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #36822		




Dean Wagner - Authorised Signatory
Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing


Date 27/01/2021

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	13/01/2021
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	37	Page	2 of 4
		Order No.	Hayden

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W21/106	W21/107	W21/108
Test Location	Lots 103/104	Lots 115/116	Lot 105
	Centre of Boundary	Centre of Boundary	Centre
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	275	275	275
Layer Thickness	300	300	300
Date Tested	13-Jan-21	13-Jan-21	13-Jan-21
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	1.940	1.928	1.990
Insitu Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.987	1.985	2.024
Peak Added Moisture (%)	+1.8	+1.7	+3.8
Moisture Correction (%)	+2.1	+2.0	+4.1
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	97.6	97.1	98.3
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #36822		




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Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing

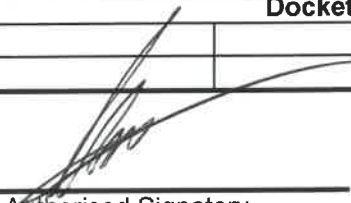
Date 27/01/2021

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	13/01/2021
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	38	Page	3 of 4
		Order No.	Hayden

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W21/109	W21/110	W21/111
Test Location	Lot 98	Lot 99	Lots 117/118
	Centre of Boundary	Centre	Centre of Boundary
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	275	275	275
Layer Thickness	300	300	300
Date Tested	13-Jan-21	13-Jan-21	13-Jan-21
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	2.101	2.006	2.018
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.057	2.042	2.050
Peak Added Moisture (%)	+1.7	+1.8	+3.7
Moisture Correction (%)	+1.9	+2.0	+4.0
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
Corrected PCWD (t/m ³)	N/A	N/A	N/A
Assigned Value	No	No	No
HILF DENSITY RATIO (%)	102.1	98.2	98.4
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #36822		




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Accredited for compliance ISO/IEC 17025 - Testing


Date 27/01/2021

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	Shadforth's Civil Pty Ltd	Job No:	J20/70
Client Address:	99 Sandalwood Lane, Forest Glen Qld 4556	Date:	13/01/2021
Project:	Residential Development - Palmview Stage 5	Tested by:	PF
Location:	Village Green, Palmview Qld	Checked:	JL
Report Number	39	Page	4 of 4
		Order No.	Hayden

Test Methods	AS 1289 5.8.1/5.7.1/2.1.1		
Sample Method	AS 1289 1.2.1		
Lab Number	W21/112	W21/113	
Test Location	Lots 94/95	Lot 111	
	Centre of Boundary	Centre	
	Final Level	Final Level	
Layer / Elevation	Allotment Fill	Allotment Fill	
Material Source	Onsite	Onsite	
Depth Tested	275	275	
Layer Thickness	300	300	
Date Tested	13-Jan-21	13-Jan-21	
Material Sampled	After Compaction	After Compaction	
Test Results			
Insitu Wet Density (t/m ³)	2.170	2.165	
Insitu Moisture Content (%)	N/A	N/A	
PCWD (t/m ³)	2.108	2.110	
Peak Added Moisture (%)	+4.3	+4.4	
Moisture Correction (%)	+4.6	+4.7	
Retaining Sieve (mm)	19.0	19.0	
Percentage Oversize (wet)	0.0	0.0	
Corrected PCWD (t/m ³)	N/A	N/A	
Assigned Value	No	No	
HILF DENSITY RATIO (%)	102.9	102.6	
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	
Degree of Compaction	95%	95%	
Remarks	Docket #36822		




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Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing

Date 27/01/2021

Appendix 3 Typical Site Conditions



Appendix 3 Typical Site Conditions



CONSTRUCTION

MATERIALS

TESTING

Appendix 3 Typical Site Conditions





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Appendix 4 Site Information

CONSTRUCTION

MATERIALS

TESTING

Information

Important Information about your Report

As a client of Wagner Soil Testing Pty Ltd you should know that site subsurface conditions cause more construction problems than any other factor. These notes have been provided to help you interpret and understand the limitations of your report.

Your report is project specific

Your report has been developed on the basis of your unique project specific requirements as understood by Wagner Soil Testing and applies only to the site investigated. Project criteria typically include the general nature of the project; its size and configuration; the location of any structure on the site; other site improvements; the presence of underground utilities; and the additional risk imposed by scope-of-surface limitations imposed by the client. Your report should not be used if there are any changes to the project without first asking Wagner Soil Testing to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Wagner Soil Testing cannot accept responsibility for problems that may occur due to changed factors if they are not consulted. Our report does not take into account any existing filled ground or any other unforeseen subsurface conditions that may change anticipated site classification.

Subsurface conditions can change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. Do not rely on a geotechnical engineering report whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. Always contact Wagner Soil Testing before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, owners

should retain the services of Wagner Soil Testing through the development stage, to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Wagner Soil Testing, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered as the project develops. If another party undertakes the implementation of recommendations of this report there is a risk that the report will be misinterpreted and Wagner Soil Testing cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Wagner Soil Testing before passing your report on to another party who may not be familiar with the background and purpose of the report. Your report should not be applied to any project other than that originally specified at the time the report was issued.

It is a requirement that the client contacts Wagner Soil Testing Pty Ltd when the exact position of the proposed building is confirmed so we can check if our Boreholes fall in the footing area [our borelogs are only presumed indicative of the whole area until this is confirmed]. In the case of a cracked house investigation more testing may be required to conclude all possible causes of settlement and or movement. Initial drilling and lab testing may only identify some of the causes of the problem. Wagner Soil Testing should be contacted when additional testing is required. It is a company policy that Wagner Soil Testing are contacted if the development (including any portion and/or envelope) is sold and/or changes title as the report is only for the use of our direct client. If the development is sold and/or changes title Wagner Soil Testing must be contacted and subsequently will carry out a comprehensive site inspection – evaluation at no cost to ensure the preliminary report is relevant and no changes whatsoever have been made.