PARKLANE GARDENS - STAGE 2

Level One Report

Civ2Con Pty Ltd

P210917-16897

26th November 2021

Pearce Geotech Pty Ltd ABN 96 155 312 879
23 Nobility Street, Moolap, VIC 3221 Australia
Ph: 03 5248 7887

26th November 2021

Civ2Con Pty Ltd
6/7 Dalton Rd
Thomastown, VIC 3074

Attention: Dylan Browne

Dear Dylan

RE: Parklane Gardens - Stage 2

Level 1 Compaction Control

This letter presents a report by Pearce Geotech Pty Ltd (PG) on Level 1 Testing Services undertaken during the construction of fill at Parklane Gardens - Stage 2, Wyndham Vale. One electronic copy provided.

Please do not hesitate to contact the undersigned should there be any queries regarding this report.

For and on behalf of Pearce Geotech Pty Ltd

Regards

Mitch Francis

A 23 Nobility St Moolap VIC 3221
P (03) 5248 7887
E Mitch@pgeo.com.au
W pearcegeotech.com.au

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CONTENTS

1 INTRODUCTION

This report presents the results of compaction control and laboratory testing services provided by Pearce Geotech Pty Ltd (PG) during the construction of fill at Parklane Gardens - Stage 2, Wyndham Vale.

PG was engaged by Civ2Con Pty Ltd (Civ2Con) to provide Level 1 testing services for the duration of these works in accordance with the specification supplied. The work was commissioned by Mr Dylan Browne of Civ2Con.

Level 1 testing, as defined in AS3798-2007 “Guidelines on Earthworks for Commercial and Residential Development”, provides for full-time 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 technicians from PG during the 13th of April 2021 to 20th May 2021.

2 SCOPE OF WORK

2.1 Area of Work

PG provided Level 1 testing and supervision of the construction filling placed. Material selection and condition, as well as compaction testing, were conducted during the construction of this fill.

This report does not include fill other than where mentioned in this report or any other fill that may be placed during this period or subsequent periods at or surrounding the subject site.

2.2 Placement Specification

As no specification was supplied AS 3798 “Guidelines on earthworks for commercial and residential developments” was adopted:

- Minimum density ratio as per item Two (2) below.

TABLE 5.1

MINIMUM RELATIVE COMPACTION

Item	Application	Minimum relative compaction, %	
		Minimum density ratio (at standard compactive effort) (Cohesive soils) (see Note 1)	Minimum density index (Cohesionless soils) (see Note 2)
1	Residential—lot, fill, house, sites	95 (see Note 3)	70
2	Commercial—fills to support minor loadings, including floor loadings of up to 20 kPa and isolated pad or strip footings to 100 kPa	98 (see Note 4)	75
3	Fill to support pavements (see Note 5)		
	(a) General fill	95	70
	(b) Subgrade (to a depth of 0.3 m)	98	75

3 CONSTRUCTION PLANT

The following construction plant was used on site as required:

- 1 x Excavator
- 1 x Grader
- 1 x Pad Foot Roller
- 1 x Water Cart
- Dump Trucks as required

4 INSPECTION AND TESTING

4.1 Construction Materials

Clay was used as fill for this project.

Fill material was sourced from:

- Onsite

All material was tested for compliance, spread and watered to achieve the specified density and moisture specification.

4.2 Fill Placement

Initial site inspection showed one fill area as per the attached site plan. This area was consecutively stripped of all deleterious silty topsoil, organic matter and existing fill down to a silty Clay. The area was then compacted with a smooth drum roller and proof rolled with a loaded dump truck. No deflection was sited.

Compaction tests and a proof roll were conducted on each tested layer of compacted fill to ensure compliance with the specification and samples of the fill material were tested in PG's NATA accredited laboratory (Accreditation Number 18877) to determine the Hilf density ratio and moisture ratio of the material. In total 16 field density tests, 16 Hilf rapid compaction tests and 16 moisture contents were conducted.

Control Fill material was placed by dump truck, spread by grader, simultaneously water conditioned wherever required and compacted. Where the material appeared too wet, dry soil was mixed in and processed to a homogenous state.

4.2.1 Test Summary

Field No.	Date	Location	Layer	Min. Ratio [%]	Density Ratio [%]
21-13388A	26/04/2021	Refer to Plan	Subgrade	98 [Std]	99.5
21-13388B	26/04/2021	Refer to Plan	Subgrade	98 [Std]	99.5
21-13388C	26/04/2021	Refer to Plan	Lift 1	98 [Std]	100.0
21-13388D	26/04/2021	Refer to Plan	Lift 1	98 [Std]	99.5
21-13388E	26/04/2021	Refer to Plan	Lift 1	98 [Std]	99.5
21-13721A	30/04/2021	Refer to Plan	Lift 2	98 [Std]	99.0
21-13721B	30/04/2021	Refer to Plan	Lift 2	98 [Std]	98.5
21-13721C	30/04/2021	Refer to Plan	Lift 2	98 [Std]	98.5
21-13721D	30/04/2021	Refer to Plan	Lift 2	98 [Std]	98.5
21-13721E	30/04/2021	Refer to Plan	Lift 2	98 [Std]	98.0
21-13721F	30/04/2021	Refer to Plan	Lift 2	98 [Std]	98.5
21-13884A	14/05/2021	Refer to Plan	Lift 2	98 [Std]	98.5
21-13884B	14/05/2021	Refer to Plan	Lift 2	98 [Std]	98.5
21-13937A	20/05/2021	Refer to Plan	FSL	98 [Std]	100.5
21-13937B	20/05/2021	Refer to Plan	FSL	98 [Std]	98.5
21-13937C	20/05/2021	Refer to Plan	FSL	98 [Std]	99.5

- Test data highlighted in red indicate a failed result.
- Test data highlighted in green indicate a pass/re-test.

5 STATEMENT OF COMPLIANCE

PG personnel have provided Level 1 inspection and testing services during construction of the fill at Parklane Gardens - Stage 2. A technician from PG was on site on a fulltime basis during fill placement and observed the construction techniques adopted.

Based on these observations made by PG personnel and the results of field and laboratory tests, we consider that the fill has been placed in accordance with the intent of the specification.

For and on behalf of Pearce Geotech Pty Ltd

Regards

Mitch Francis

Pearce Geotech

Appendix A

Test Results

Material Test Report

Pearce Geotech Pty Ltd
23 Nobility Street Moolap VIC 3221
Phone: (03) 5248 7887
Email: tony@pearcegeotech.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Anthony Green
Senior Technician
NATA Accredited Laboratory Number: 18877

Report Number: **P210917-1**
Issue Number: 1
Date Issued: 26/04/2021
Client: Civ2Con
Suite 3/4, Level 1, Young Street , Moonee Ponds VIC 3039
Project Number: P210917
Project Name: Park lane Stg 2
Work Request: 13388
Date Sampled: 14/04/2021
Dates Tested: 14/04/2021 - 15/04/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: TRN 5545
Specification: 98% Standard
Location: TRN 5545
Material: Clay
Material Source: Imported

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	21-13388A	21-13388B	21-13388C	21-13388D	21-13388E
Date Tested	13/04/2021	13/04/2021	13/04/2021	13/04/2021	13/04/2021
Time Tested	13:07	13:13	13:19	13:24	13:30
Test Request #/Location	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill
Layer / Reduced Level	Subgrade	Subgrade	Lift 1	Lift 1	Lift 1
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Insitu Clay	Insitu Clay	Insitu Clay	Insitu Clay	Insitu Clay
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	**	**
Field Wet Density (FWD) t/m^3	1.88	1.89	1.89	1.90	1.89
Field Moisture Content %	20.8	20.8	20.4	21.1	20.8
Field Dry Density (FDD) t/m^3	1.56	1.57	1.57	1.56	1.56
Peak Converted Wet Density t/m^3	1.89	1.90	1.89	1.91	1.90
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	2.0	2.0	2.0	2.5	2.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**99.5**	**100.0**	**99.5**	**99.5**
Compaction Method	**Standard**	**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

Pearce Geotech Pty Ltd
23 Nobility Street Moolap VIC 3221
Phone: (03) 5248 7887
Email: tony@pearcegeotech.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Anthony Green
Senior Technician
NATA Accredited Laboratory Number: 18877

Report Number: **P210917-5**
Issue Number: 1
Date Issued: 11/05/2021
Client: Civ2Con
Suite 3/4, Level 1, Young Street , Moonee Ponds VIC 3039
Project Number: P210917
Project Name: Park Lane Gardens Stage 2
Project Location: Wyndham Vale
Work Request: 13721
Date Sampled: 30/04/2021
Dates Tested: 04/05/2021 - 10/05/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: TRN 6266
Specification: 98% Standard
Location: TRN 6266
Material: Clay
Material Source: Insitu

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	21-13721A	21-13721B	21-13721C	21-13721D	21-13721E	21-13721F
Date Tested	30/04/2021	30/04/2021	30/04/2021	30/04/2021	30/04/2021	30/04/2021
Time Tested	13:40	13:45	13:51	13:59	14:04	14:10
Test Request #/Location	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill
Layer / Reduced Level	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Insitu Clay	Insitu Clay	Insitu Clay	Insitu Clay	Insitu Clay	Insitu Clay
Test Depth (mm)	175	175	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	**	**	**
Field Wet Density (FWD) t/m^3	1.88	1.88	1.87	1.88	1.87	1.87
Field Moisture Content %	16.9	18.2	18.9	16.8	17.2	17.3
Field Dry Density (FDD) t/m^3	1.61	1.59	1.58	1.61	1.60	1.59
Peak Converted Wet Density t/m^3	1.90	1.90	1.90	1.91	1.91	1.90
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-0.5	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**98.5**	**98.5**	**98.5**	**98.0**	**98.5**
Compaction Method	**Standard**	**Standard**	**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

Pearce Geotech Pty Ltd
23 Nobility Street Moolap VIC 3221
Phone: (03) 5248 7887
Email: tony@pearcegeotech.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Anthony Green
Senior Technician
NATA Accredited Laboratory Number: 18877

Report Number: **P210917-7**
Issue Number: 1
Date Issued: 21/05/2021
Client: Civ2Con
Suite 3/4, Level 1, Young Street , Moonee Ponds VIC 3039
Contact: Jowe
Project Number: P210917
Project Name: Park Lane Gardens Stage 2
Project Location: Wyndham Vale
Work Request: 13884
Date Sampled: 14/05/2021
Dates Tested: 17/05/2021 - 18/05/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: TRN 6357
Specification: 98% Standard
Location: TRN 6357
Material: Clay
Material Source: Insitu

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	21-13884A	21-13884B	
Date Tested	14/05/2021	14/05/2021	
Time Tested	08:13	08:18	
Test Request #/Location	Lot 223	Lot 220	
Layer / Reduced Level	Lift 2	Lift 2	
Thickness of Layer (mm)	250	250	
Soil Description	Insitu Clay	Insitu Clay	
Test Depth (mm)	225	225	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	**	**	
Field Wet Density (FWD) t/m^3	1.93	1.94	
Field Moisture Content %	26.8	26.6	
Field Dry Density (FDD) t/m^3	1.52	1.53	
Peak Converted Wet Density t/m^3	1.95	1.97	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	0.0	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**98.5**	**98.5**	
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

Pearce Geotech Pty Ltd
23 Nobility Street Moolap VIC 3221
Phone: (03) 5248 7887
Email: tony@pearcegeotech.com.au

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Anthony Green
Senior Technician
NATA Accredited Laboratory Number: 18877

Report Number: **P210917-8**
Issue Number: 1
Date Issued: 26/05/2021
Client: Civ2Con
Suite 3/4, Level 1, Young Street , Moonee Ponds VIC 3039
Contact: Jowe
Project Number: P210917
Project Name: Park Lane Gardens Stage 2
Project Location: Wyndham Vale
Work Request: 13937
Date Sampled: 20/05/2021
Dates Tested: 20/05/2021 - 24/05/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: TRN 6367
Specification: 98% Standard
Location: TRN 6367
Material: Clay
Material Source: Insitu

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	21-13937A	21-13937B	21-13937C
Date Tested	20/05/2021	20/05/2021	20/05/2021
Time Tested	10:34	10:39	10:44
Test Request #/Location	Allotment Fill	Allotment Fill	Allotment Fill
Layer / Reduced Level	FSL	FSL	FSL
Thickness of Layer (mm)	200	200	200
Soil Description	Insitu Clay	Insitu Clay	Insitu Clay
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**
Field Wet Density (FWD) t/m^3	1.87	1.85	1.86
Field Moisture Content %	26.9	26.5	26.4
Field Dry Density (FDD) t/m^3	1.47	1.46	1.47
Peak Converted Wet Density t/m^3	1.86	1.88	1.87
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	1.5	1.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.5**	**98.5**	**99.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

Pearce Geotech

CLIENT NAME:
Civ2Con Pty Ltd

PROJECT NAME:
Parklane Gardens - Stage 2

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E admin@pearcegeotech.com.au
W pearcegeotech.com.au