



Pearce Geotech

MERRIFIELD SOUTH RESIDENTIAL STAGE 7

Level One Report

Winslow Constructors Pty Ltd

P252320

7th August 2025



7th August 2025

Winslow Constructors Pty Ltd
Level 1, 6 English Street
Essendon Fields, VIC, 3041

Attention: Ali Al Musharafawi

Dear Ali

RE: Merrifield South Residential Stage 7
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 Merrifield South Residential Stage 7. 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



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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 Merrifield South Residential Stage 7.

PG was engaged by Winslow Constructors Pty Ltd to provide Level 1 testing services for the duration of these works in accordance with the specification supplied. The work was commissioned by Mr Ali Al Musharafawi of Winslow Constructors.

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 from the 6th September 2024 to 4th August 2025. .

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

While no earthworks specification was supplied, the fill placement and testing requirements for the structural fill were derived from AS 3798 “Guidelines on earthworks for commercial and residential developments” – Table 5.1, with the minimum density ratio as 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

4 INSPECTION AND TESTING

4.1 Construction Materials

Clay was used as fill for this project.

Fill material was sourced from:

- Onsite Cuts

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 fill areas as per the attached site plan. These areas were consecutively stripped of all deleterious silty topsoil, organic matter and existing fill down to a Silty Clay. These areas were then compacted with a smooth drum roller and proof rolled with a loaded dump truck.

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 11 field density tests, 11 Hilf rapid compaction tests and 11 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 [%]
24-31524A	6/9/2024	Lot 709	Lift 1	98% Std	99
24-31524B	6/9/2024	Lot 708	Lift 1	98% Std	98.5
24-31524C	6/9/2024	Lot 706	Lift 1	98% Std	99
24-31524D	6/9/2024	Lot 705	Lift 1	98% Std	98.5
24-31524E	6/9/2024	Lot 703	Lift 1	98% Std	99.5
24-31524F	6/9/2024	Lot 701	Lift 1	98% Std	99
25-34837A	4/7/2025	Lot 702	Lift 1	98% Std	98.5
25-34837B	4/7/2025	Lot 704	Lift 2	98% Std	99.5
25-34837C	4/7/2025	Lot 706	Lift 2	98% Std	99
25-34837D	4/7/2025	Lot 708	Lift 2	98% Std	99.5
25-34837E	4/7/2025	Lot 709	Lift 2	98% Std	100

5 STATEMENT OF COMPLIANCE

PG personnel have provided Level 1 inspection and testing services during construction of the fill at Merrifield South Residential Stage 7. 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



Anthony Green
Senior Technician



Appendix A

Test Results

Material Test Report

Report Number: P252407-2
Issue Number: 1
Date Issued: 07/08/2025
Client: Winslow Constructors Pty Ltd
Level 1, 6 English Street, Essendon Fields Vic 3041
Contact: Ali Al Musharafawi
Project Number: P252407
Project Name: Merrifield South Residential Stage 7
Project Location: Mickleham
Work Request: 31524
Date Sampled: 06/09/2024
Dates Tested: 23/09/2024 - 23/09/2024
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: TRN 16740
Specification: 98% Standard
Location: TRN 16740
Material: Clay
Material Source: Insitu





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

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	24-31524A	24-31524B	24-31524C	24-31524D	24-31524E	24-31524F
Date Tested	06/09/2024	06/09/2024	06/09/2024	06/09/2024	06/09/2024	06/09/2024
Time Tested	11:13	11:07	11:28	11:33	11:46	11:50
Test Request #/Location	Lot 709	Lot 708	Lot 706	Lot 705	Lot 703	Lot 701
Layer / Reduced Level	Lift 1	Lift 1	Lift 1	Lift 1	Lift 1	Lift 1
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Clay	Clay	Clay	Clay	Clay	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 (%)	0	0	0	0	0	0
Field Wet Density (FWD) t/m ³	2.04	2.04	2.03	2.04	2.05	2.04
Field Moisture Content %	17.3	15.6	16.2	16.9	19.7	15.0
Field Dry Density (FDD) t/m ³	1.74	1.76	1.75	1.74	1.71	1.77
Peak Converted Wet Density t/m ³	2.07	2.07	2.05	2.07	2.06	2.06
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**	**
Moisture Variation (Wv) %	1.5	2.0	2.0	2.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	99.0	98.5	99.0	98.5	99.5	99.0
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

Report Number: P252407-1
Issue Number: 2 - This version supersedes all previous issues
Reissue Reason: wrong lift
Date Issued: 07/08/2025
Client: Winslow Constructors Pty Ltd
Level 1, 6 English Street, Essendon Fields Vic 3041
Contact: Ali Al Musharafawi
Project Number: P252407
Project Name: Merrifield South Residential Stage 7
Project Location: Mickleham
Work Request: 34837
Date Sampled: 04/07/2025
Dates Tested: 04/07/2025 - 10/07/2025
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Remarks: TRN 19066
Specification: 98% Standard
Location: TRN 19066
Material: Clay
Material Source: Insitu



Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Anthony Green
Senior Technician

NATA Accredited Laboratory Number: 18877

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	25-34837A	25-34837B	25-34837C	25-34837D	25-34837E
Date Tested	04/07/2025	04/07/2025	04/07/2025	04/07/2025	04/07/2025
Time Tested	12:16	12:20	12:31	12:40	12:46
Test Request #/Location	Lot 702	Lot 704	Lot 706	Lot 708	Lot 709
Layer / Reduced Level	Lift 2	Lift 2	Lift 2	Lift 2	Lift 2
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Clay	Clay	Clay	Clay	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	2.00	2.00	1.99	2.00	2.00
Field Moisture Content %	20.4	22.0	23.9	24.4	22.2
Field Dry Density (FDD) t/m ³	1.66	1.64	1.61	1.61	1.64
Peak Converted Wet Density t/m ³	2.03	2.01	2.01	2.01	2.01
Adjusted Peak Converted Wet Density t/m ³	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	98.5	99.5	99.0	99.5	100.0
Compaction Method	Standard	Standard	Standard	Standard	Standard
Remarks	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

