





Level One Report

Brentwood Estate Stage 9C

Document Details

Creation Details

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Amendment Register

Revision Number	Date	Amended By	Signature	Reviewed By	Signature

Introduction

Quality Control Testing Services (QCTS) was engaged by BMD on the 18th of November 2021 to the 21st of March 2022, to provide “Level 1” earthworks inspection and testing services for earthworks for “Brentwood Estate Stage 9C” residential project, located at Bellbird Park.

Supervision and compaction control testing were carried out during the placement of material to the lot, in accordance with Section 8.0 of AS3798-2007- “Guidelines for Earthworks for Commercial and Residential Developments”.



Preliminary Stripping

Stripping of any vegetation and organic material was carried out by excavator and was utilised to remove any deleterious materials. Once the site was cleared, the surface was then compacted using padfoot roller until No deflection was noted. A proof roll was carried out on the treated surface to ascertain if any “soft spots” or unsuitable material was present.



Earthworks

The filling process involved transporting cut to fill material into the fill area. Fill material consisted of a brown/orange, medium plastic sandy clay, from on-site cut areas. The fill material was conditioned and placed in layers not exceeding 300mm loose. A bulldozer and/or compactor were used to spread and padfoot roller used to compact the fill material. A water cart was available to add moisture to condition the fill material where needed. In total, approximately 1000 cubic metres of fill was placed throughout the site.



Compliance

Test locations were randomly selected by QCTS, and compaction control tests were carried out throughout the filling process. A total of three (3) field density tests were conducted in accordance with the minimum test frequency detailed in Table 8.1 of AS3798. The specification requirements for compaction on the project were that all fill materials were to be placed, conditioned, and compacted in layers to a density ratio of not less than 95% (AS 1289 5.8.1, 5.7.1 & 2.1.1) with the moisture content suitable to achieve the desired compaction levels, as per Table 5.1 of AS3798. The results of tests performed for the project are found in Appendix B.

Conclusion

Based on the results obtained from compaction control tests along with observations made during earthworks operation indicate that all fill material placed would be considered to have met the requirements of AS3798-2007 and good engineering practice.

This report does not include any other geotechnical issues, road works, backfill behind any retaining structures or trench services, any topsoil placed, slope stability and site drainage.



APPENDIX A

Earthworks Plan





APPENDIX B

Test Results

Material Test Report

Report Number: B21071-118
Issue Number: 1
Date Issued: 20/04/2022
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Level One Supervision - Stage 9C
Work Request: 2189
Date Sampled: 21/03/2022
Dates Tested: 21/03/2022 - 06/04/2022
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: Minimum 98% Standard Compaction
Site Selection: Selected By QCTS Technician
Material: General Fill
Material Source: On Site



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: David Henke
 Senior Technician

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	B22-2189A	B22-2189B	B22-2189C
Sample Number	B22-2189A	B22-2189B	B22-2189C
Date Tested	21/03/2022	21/03/2022	21/03/2022
Time Tested	**	**	**
Test Request #/Location	Lot 217	Lot 219	Lot 221
Layer / Reduced Level	**	**	**
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly Sandy Clay, Brown	Gravelly Sandy Clay, Brown	Gravelly Sandy Clay, Brown
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	1	3
Field Wet Density (FWD) t/m ³	2.03	2.05	2.05
Field Moisture Content %	9.8	10.4	10.6
Field Dry Density (FDD) t/m ³	1.85	1.85	1.85
Peak Converted Wet Density t/m ³	**	**	**
Adjusted Peak Converted Wet Density t/m ³	2.04	2.06	2.05
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	2.0	3.0	2.5
Hilf Density Ratio (%)	99.5	99.5	100.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC



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