



## Brisbane Soil Testing

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Connemar Pty. Ltd.

ABN 50 065 093 647

Geotechnical Testing Services.



Job No.2889

30 May 2013

BMD Constructions Pty Ltd  
PO Box 197  
WYNNUM CENTRAL QLD 4178

Attn Mr Peter Kavanagh

Dear Sir,

**RE: CAPESTONE ESTATE – STAGE 2A**  
(Allotment Fill – Geotechnical Inspection & Testing)

### SCOPE

Brisbane Soil Testing were commissioned by BMD Constructions Pty Ltd to provide geotechnical inspection and testing of the earthworks on the above development.

Some filling was required as part of the development and for this work, our site presence was maintained in accordance with AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments" Appendix B, "Level 1". As directed the scope of the Level 1 inspection and testing was:

- (i) check adequacy of pre-fill ground preparation
- (ii) inspect and carry out compaction control testing of placed fill materials

### CONTROL INSPECTION AND TESTING

An inspection of area to be filled was carried out on 17 December 2008 and on an ongoing basis as the job progressed.

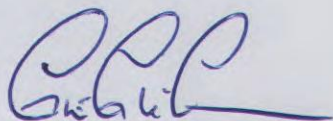
On-site cut materials were used for filling and these materials were generally placed in 0.20m loose horizontal layers and compacted with an 815 Compactor and a pad foot vibrating roller.

Two hundred and thirty field density tests were carried out between 17 December 2008 and 11 December 2009, and also between 14 December 2012 and 10 May 2013. These tests recorded Dry Density Ratios between 95.0% and 105.5% relative to the standard compaction test and field moisture contents within -6.0% and +6.5% of their respective optimum moisture contents, AS1289.5.1.1.

Attached document B37/5 (Report Nos. 31452, 31453, 31454, 31455, 31456, 31457, 31458, 31459, 31460, 31461, 31462, 31463, 31464, 31465, 31466, 31467, 27145, 31468, 31469, 31470, 31471, 31472, 31475, 71476, 31491, 31492, 31493, 31500, 31502, 31503, 31507, 3159, 31530, 31531, 31540, 31546, 31559, 31568, 31571, 31579, 31608, 31654, 31699, 31719, 31738, 31739, 31843, 31886, 31887, 31940, 31914, 31918, 31927, 31941 and 31931) provide full test data for the compaction control tests.

## CONCLUSION

We confirm that vegetation, topsoil, and unsuitable materials were removed and that a sound base for the proposed filling was provided. We further confirm that all filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission, and that the required 95% density ratio has been achieved.



GREG McGRANN  
**BRISBANE SOIL TESTING**



ACCREDITED FOR  
**TECHNICAL  
COMPETENCE**

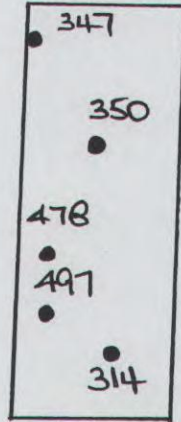
Accredited Laboratory No.2415



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**EARTHWORKS SUMMARY REPORT  
CAPESTONE ESTATE – STAGE 2A  
LOT 122**



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**Field Density Results**

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
314	11.05.09	o/s 4m South bdy, o/s 6m East bdy. R.L.3.30.	96.0
347	11.12.09	o/s 3m North bdy, o/s 12m East bdy. R.L.4.92.	99.5
350	11.12.09	o/s 14m North bdy, o/s 6m East bdy. R.L.4.00.	96.0
478	5.02.13	o/s 10m Front bdy, o/s 3m Left bdy. R.L.5.47.	91.5
497	13.02.13	o/s 8m Front bdy, o/s 3m Left bdy. R.L.5.50. Retest.	96.5

In our opinion fill on Lot 122 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% to (AS1289.5.1.1 Standard Compaction). We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

**GREG McGRANN**



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