

# CAPESTONE ESTATE STAGE 12B2 LEVEL 1 REPORT



Job No 1418

16<sup>th</sup> of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

Attn: Glen Fuller

#### **RE: CAPESTONE ESTATE- STAGE 12B2**

(Allotment Fill, Sewer Tunnel Bore Pits – Geotechnical Inspection & Testing)

#### **SCOPE**

Brisbane Soil Testing were commissioned by BMD Constructions Pty Ltd to provide geotechnical inspection and testing of the allotment earthworks and sewer tunnel bore pits on the above stage subdivision.

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) remove unsuitable materials
- (iii) inspect and carry out compaction control testing of placed fill materials

#### **CONTROL INSPECTION AND TESTING**

Prior to the civil works in Stage 12B2, bulk earthworks operations were undertaken in what was then known as Capestone Estate Stage 12B – Lot 1394. The Level 1 report dated 13<sup>th</sup> of November 2018 covering this stage of works is attached at Appendix D.

In November of 2020 filling to Capestone Estate Stage 12B2 commenced to bring the allotments up to design final level. An inspection of the areas to be filled was carried out on the 2<sup>nd</sup> of November 2020 and on an ongoing basis as the project progressed.

Materials from other cut areas of the site were used for filling and these materials were generally placed in 0.20m loose horizontal layers and compacted with a vibrating pad foot roller.

Thirty-nine field density tests were carried out during the Stage 12B - Lot 1394 earthworks phase, between the 19<sup>th</sup> of July 2014 and the 14<sup>th</sup> of August 2018.

Twenty-four field density tests were carried out during the Stage 12B2 civil earthworks phase between the 4<sup>th</sup> of November 2020 and the 2<sup>nd</sup> of December 2020.

Some pits were required for the installation of sewer infrastructure. The location of these pits are shown on the attached sewer plan BST-CFSEW12B2

The locations of all tests taken are shown on the attached plans at Appendix A.

Field density test reports for Stage 12B2 are attached at Appendix C and provide full test data for the compaction control tests.

#### **CONCLUSION**

Based on the test results and site inspections, we conclude that the fill foundation is considered to comply with requirements of Table 5.1- Item 1 of AS3798-2007 and the project specifications.

We confirm that all vegetation and topsoil was removed, and that a sound base for the proposed filling was provided. We further confirm that all filling to design final level in the area defined laterally on the attached drawing numbers "BST-CF12B2 and BST-CFSEW12B2" can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

Individual allotment certificates are attached at Appendix B.

**GREG McGRANN** 

**BRISBANE SOIL TESTING** 

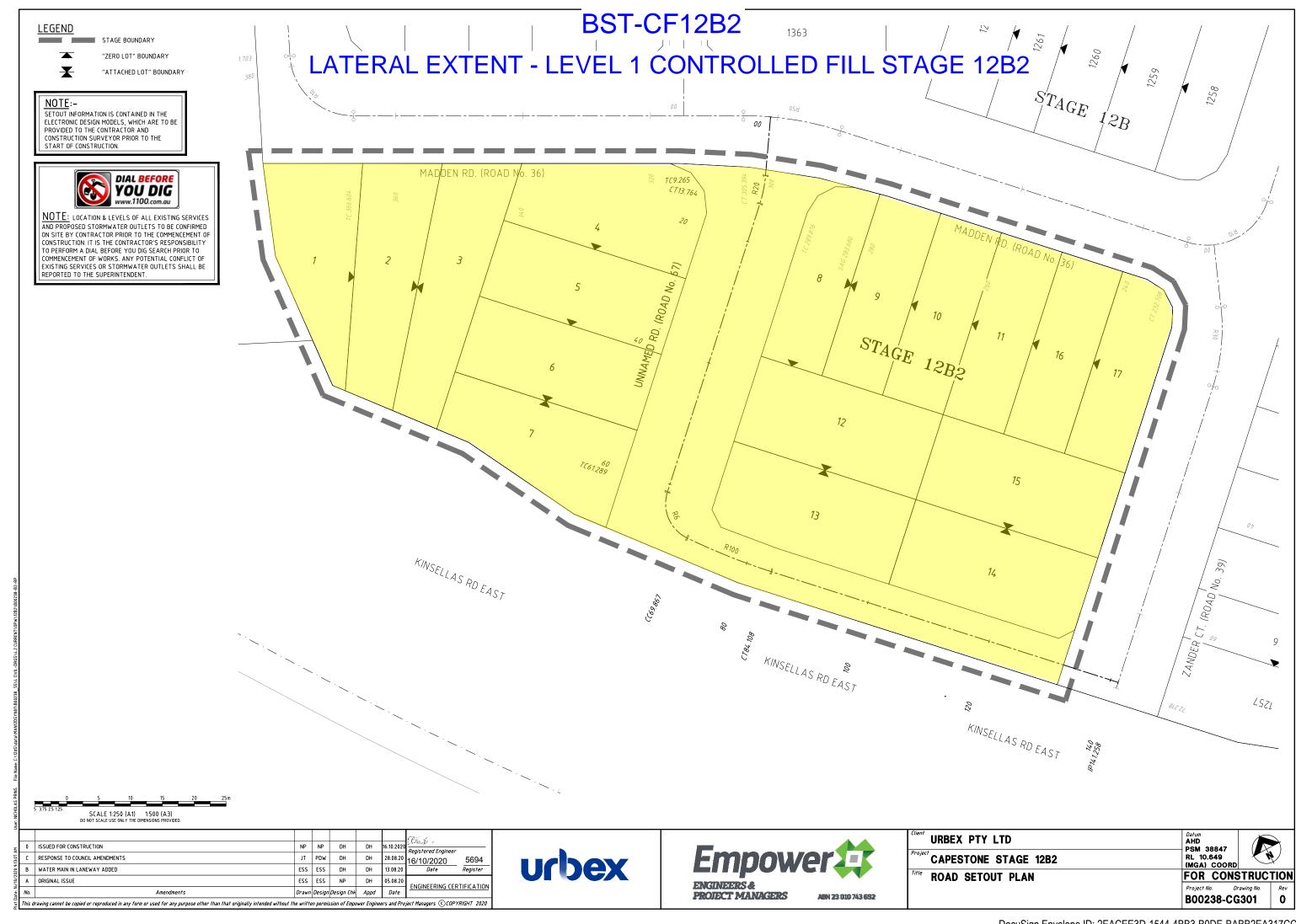


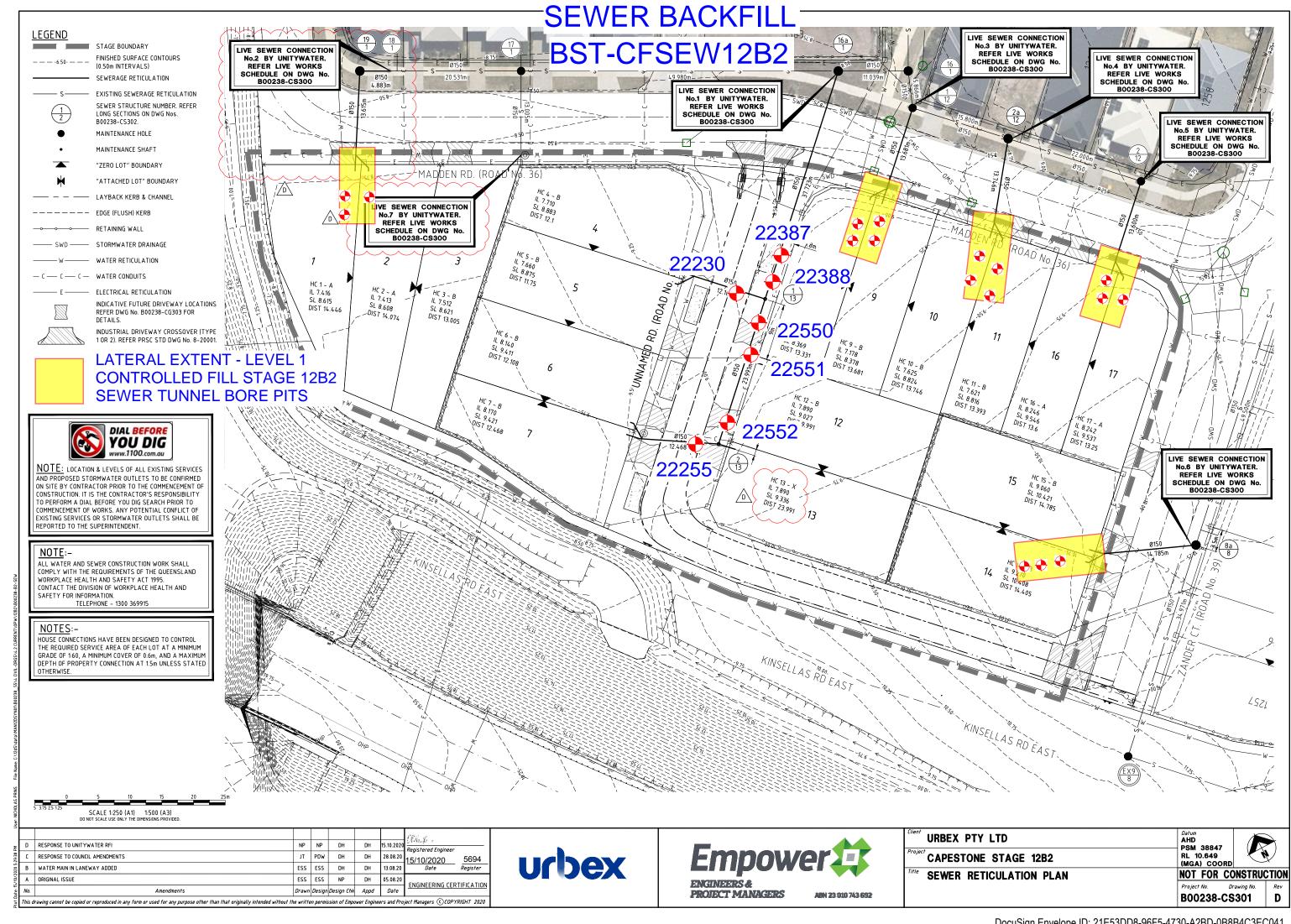


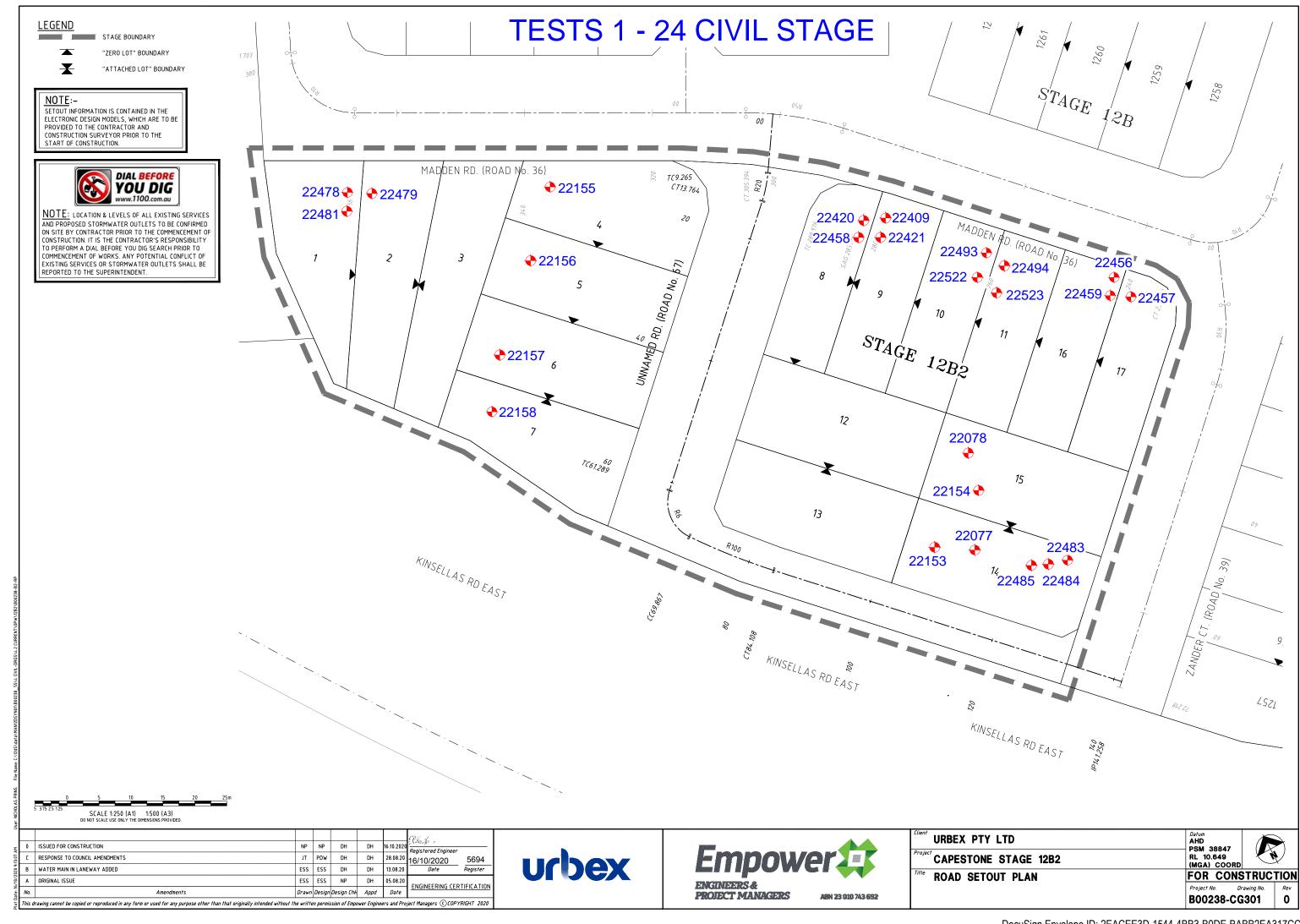
# **APPENDIX A**

Site Plans/Test Locations











# **APPENDIX B**

Individual Allotment Certificates



16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

LOT NO. 1

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 1 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 1 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 2

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 2 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 2 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 3

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 3 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 3 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

LOT NO. 4

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 4 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 4 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 5

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 5 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 5 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 6

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 6 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 6 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 7

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 7 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 7 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 8

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 8 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 8 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 9

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 9 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 9 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 10

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 10 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 10 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 11

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 11 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 11 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 12

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 12 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 12 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 13

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 13 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 13 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 14

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 14 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 14 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 15

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 15 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 15 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 16

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 16 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 16 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,

16th of December 2020

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

RE: CONTROLLED FILL CERTIFICATE LOCATION: CAPESTONE ESTATE STAGE 12B2

**LOT NO.** 17

Brisbane Soil Testing were commissioned on this project to provide geotechnical earthworks inspection and testing services on a Level 1 basis as detailed in Clause 8.2 of AS 3798-2007 "Guidelines on earthworks for commercial and residential developments". Full details of the inspection and testing program are provided in the Brisbane Soil Testing Level 1 Report dated 16<sup>th</sup> of December 2020.

Based on the test results and site inspections, Brisbane Soil Testing concludes that all fill on Lot 17 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 Item 1 of AS3798-2007 and the project specifications.

We further confirm that all fill to design final level on Lot 17 (excluding topsoil placed subsequent to completion of controlled filling) can be termed "Controlled Fill" in accordance with AS2870-2011 "Residential Slabs and Footings" (Clause 6.4.2 (a)) via a Level 1 inspection and testing commission.

Regards,



# **APPENDIX C**

Test Results



20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Feature ALLOTMENT FILL Report No. 45978 Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Location **SEE BELOW** Job No. 1418 Project **CAPESTONE ESTATE STAGE 12B2** Date Tested 04/11/2020 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %
22077	8:00	150	LOT 14 10m Rear bdy, 4m Right bdy RL 10.50	22077 Material Des	- cription: BROW	14.5	16.5	Adj. 2.0 DRY	2.19	<del>Adj.</del> 2.09	105.0
22078	8:30	150	LOT 15 3m Rear bdy, 5m Right bdy	22078	-	13.5	16.0	Adj. 2.5 DRY	2.09	Adj. 2.08	100.5
			RL 10.20	Material Des	cription: BROW	N SILTY CI	LAY & RUC	Adj.	ENIS	<del>Adj</del> .	
				Material Des	cription:			Adj.		Adj.	
				Material Des	cription:			Adj.		Adj.	
				Material Des	cription:	<u> </u>	<u> </u>	Adj.		Adj.	
				Material Des	cription:			<del>Adj</del> .		<del>Adj</del> .	
Remarks:								Specif	ied Density	Ratio 95% STD	
Test Procedures: AS1289 5.1.1, 5.3.1, 5.7.1, 2.1.1  Prepared By: <i>G MCGRANN</i> Date: 10/12/2020  Checked By: <i>G MCGRANN</i>			NATA	Determined on material finer than 19mm  Accredited for compliance with ISO/IEC 17025 – Testing.  Accreditation No.2415			Appro	Greg McGrann/Manager Approved Signatory Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Project **CAPESTONE ESTATE STAGE 12B2** 

Feature Location

ALLOTMENT FILL **SEE BELOW** Date Tested 05/11/2020

Report No. Job No.

45979 1418

Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %
22153	11:30	150	LOT 14 4m Rear bdy, 6m Right bdy RL 10.85	22153 Material Des	- cription: BROW	11.5 N SILTY SA	13.0 NDY CLA	Adj. 1.5 DRY	2.20	Adj. 2.13	103.5
22154	12:00	150	LOT 15 5m Rear bdy, 3m Left bdy RL 10.63	22154	- cription: BROW	12.5	14.5	Adj. 2.0 DRY	2.09	Adj. 2.11	99.0
22155	12:30	150	LOT 4 2m Rear bdy, 3m Right bdy RL 9.14	22155	- cription: BROW	12.5	13.5	Adj. 1.0 DRY	2.14	Adj. 2.13	100.5
22156	13:00	150	LOT 5 3m Rear bdy, 4m Right bdy	22156	-	11.5	12.5	Adj. 1.0 DRY	2.20	Adj. 2.19	100.5
22157	13:30	150	RL 9.35 LOT 6 4m Rear bdy, 4m Left bdy RL 9.50	22157	cription: BROW	11.0	12.0	Adj. 1.0 DRY	2.15	Adj. 2.13	101.0
22158	14:00	150	LOT 7 5m Rear bdy, 4m Right bdy RL 9.72	22158	- cription: DARK	9.5	12.0	Adj. 2.5 DRY	2.19	Adj. 2.17	101.0
Remarks:								Specif	ied Density	Ratio 95% STD	
Test Procedures: AS1289 5.1.1, 5.3.1, 5.7.1, 2.1.1  Prepared By: <i>G MCGRANN</i> Date: 10/12/2020  Checked By: <i>G MCGRANN</i>				NATA Accreditation No.	Accredited for compliance		C 17025 – Testing	Appro	AcGrann/Moved Signator	- 1 - 1 -	46

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

46022

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Project **CAPESTONE ESTATE STAGE 12B2** 

Feature ALLOTMENT FILL Location **SEE BELOW** Date Tested 23/11/2020

Report No. Job No. 1418 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %	
22409	9:20	150	LOT 9 3m Front bdy, 1m Right bdy 1.55m below F.L.	22409 Material Des	- cription: BROW	16.0 N SII TV S <i>A</i>	15.5	Adj. 0.5 WET	2.11	Adj. 2.13	99.0	
22420	13:00	150	LOT 8 4m Front bdy, 1.5m Left bdy 1.1m below F.L.	22420	cription: REDDI	14.5	15.5	Adj. 1.0 DRY	2.11 Y	Adj. 2.11	100.0	
22421	14:30	150	LOT 9 5m Front bdy, 1m Right bdy 0.65m below F.L.	22421	- cription: REDDI	13.5	16.0	Adj. 2.5 DRY	2.15	Adj. 2.11	102.0	
			o.dom selew 1.2.			SII BROW	, TV SIETT S	Adj.		<del>Adj</del> .		
				Material Des	cription:			<del>Adj</del> .		Adj.		
				Material Des	<u>cription</u>							
					•			<del>Adj</del> .		Adj.		
				Material Des	cription:		•			•		
Remarks:								Specif	ied Density	Ratio 95% STD		
Test Procedu	ires: AS128	39 5.1.1, 5.3	3.1, 5.7.1, 2.1.1	Determined of	on material finer	than 19mm						
Date: 10/12/	Prepared By: G MCGRANN Date: 10/12/2020 Charled By: C MCGRANN			Accredited for compliance with ISO/IEC 17025 – Testing.			Greg N	Greg McGrann/Manager Approved Signatory				
	hecked By: G MCGRANN				Accreditation No.2415				Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

46110

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Project **CAPESTONE ESTATE STAGE 12B2** 

Feature ALLOTMENT FILL Location **SEE BELOW** Date Tested 24/11/2020

Report No. Job No. 1418 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %
22456	12:30	150	LOT 16 2m Front bdy, 1m Left bdy 1.2m below F.L.	22456	- cription: DARK	11.0	12.5	Adj. 1.5 DRY	2.14	Adj. 2.13	100.5
22457	14:30	150	LOT 17 3m Front bdy, 2m Right bdy	22457	-	10.5	14.5	Adj. 4.0 DRY	2.06	Adj. 2.07	99.5
			0.5m below F.L.	Material Des	cription: DARK	BROWN SI	LIY CLAY	<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:			<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:						
								<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:					Į.	
								<del>Adj</del> .		<del>Adj</del> .	
				Material Description:							
Remarks:								Specif	ied Density	Ratio 95% STD	
Test Procedu	ires: AS128	39 5.1.1, 5.3	3.1, 5.7.1, 2.1.1	Determined of	on material finer	than 19mm					
Date: 10/12/	Prepared By: G MCGRANN Date: 10/12/2020			Accredited for compliance with ISO/IEC 17025 – Testing.				Greg N	AcGrann/Mo		
Checked By:	Checked By: G MCGRANN			Accreditation No.2415				Approved Signatory Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Feature ALLOTMENT FILL Report No. 46111 Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Location **SEE BELOW** Job No. 1418 Project **CAPESTONE ESTATE STAGE 12B2** Date Tested 25/11/2020 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %
22458	8:00	150	LOT 8 6m Front bdy, 2m Left bdy 0.2m below F.L.	22458 Material Des	- scription: BROW	9.5 N SII TY CI	14.0 AY & ROC	Adj. 4.5 DRY	1.96	Adj. 2.06	95.0
22459	9:00	150	LOT 16 4m Front bdy, 1m Left bdy	22459	-	12.5	15.5	Adj. 3.0 DRY	2.08	Adj. 2.06	101.0
			F.L.	Material Des	scription: BROW	N SILTY CI	LAY & ROC	CK FRAGME Adj.	ENTS	Adj.	
				Material Des	cription:			Adj.		Adj.	
				Material Des	scription:			Adj.		Adj.	
				Material Des	cription:			Adi.		Adi.	
				Material Des	scription:			<del>Adj</del> .		<del>Adj</del> .	
Remarks:		•			•			Specif	ied Density	Ratio 95% STD	
Test Procedures: AS1289 5.1.1, 5.3.1, 5.7.1, 2.1.1  Prepared By: <i>G MCGRANN</i> Date: 10/12/2020  Checked By: <i>G MCGRANN</i>			NATA Accreditation No.2	Accredited for comple		C 17025 – Testin	Appro	Greg McGrann/Manager Approved Signatory Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Feature ALLOTMENT FILL Report No. 46112 Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Location **SEE BELOW** Job No. 1418 Project **CAPESTONE ESTATE STAGE 12B2** Date Tested 27/11/2020 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %	
22478	12:00	150	LOT 1 3m Front bdy, 2m Left bdy 1.1m below F.L.	22478 Material Des	- cription: BROW	12.5 N SILTY SA	13.5 ANDY CLA	Adj. 1.0 DRY	2.06	Adj. 2.12	97.0	
22479	13:45	150	LOT 2 4m Front bdy, 1m Right bdy 0.5m below F.L.	22479	cription: BROW	13.5	14.5	Adj. 1.0 DRY	2.10	Adj. 2.10	100.0	
22481	14:30	150	LOT 1 5m Front bdy, 2m Left bdy F.L.	22481	- cription: DARK	13.5	14.5	Adj. 1.0 DRY	2.08	Adj. 2.10	99.0	
			1.23	Triatorial Bes	oription. Britis	DICO VIIV DI		Adj.		Adj.		
				Material Des	cription:			<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:							
					•			<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:		ı					
Remarks:								Specif	ied Density	Ratio 95% STD		
			3.1, 5.7.1, 2.1.1	Determined of	on material finer	than 19mm						
	Prepared By: G MCGRANN Date: 10/12/2020			NATA Accredited for compliance with ISO/IEC 17025 – Testing.				Greg N	Greg McGrann/Manager			
Checked By:	Checked By: G MCGRANN			Accreditation No.2415					Approved Signatory Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD
Address Project PO BOX 197, WYNNUM CENTRAL QLD 4178
CAPESTONE ESTATE STAGE 12B2

Feature ALLOTMENT FILL
Location SEE BELOW
Date Tested 30/11/2020

Report No. 46117 Job No. 1418 Tested by AC JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %	
22483	10:40	150	LOT 14 5m Front bdy, 1m Right bdy	22483	-	15.0	16.0	Adj. 1.0 DRY	2.07	<del>Adj.</del> 2.09	99.0	
			1.4m below F.L.	Material Des	cription: BROW	N SILTY CI	LAY					
22484	12:10	150	LOT 14 6m Front bdy, 1m Right bdy	22484	-	14.0	16.5	Adj. 2.5 DRY	2.20	<del>Adj</del> . 2.11	104.0	
			0.8m below F.L.	Material Des	cription: DARK	BROWN SI	LTY CLAY	1				
22485	13:15	150	LOT 14 7m Front bdy, 3m Right bdy	22485	-	14.0	14.5	Adj. 0.5 DRY	2.12	Adj. 2.13	99.5	
			0.2m below F.L.	Material Des	cription: BROW	N SILTY CI	LAY					
								<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:							
					•			<del>Adj</del> .		<del>Adj</del> .		
				Material Des	crintion:					l		
				Waterial Bes	onpuon.			<del>Adj</del> .		Adj.		
				Material Des	cription:							
Remarks:								Specif	ied Density	Ratio 95% STD		
Test Procedu	ires: AS128	39 5.1.1, 5.3	3.1, 5.7.1, 2.1.1	Determined of	on material finer	than 19mm						
Prepared By	Prepared By: G MCGRANN Date: 10/12/2020			NATA Accredited for compliance with ISO/IEC 17025 – Testing.				g. Greg N	Greg McGrann/Manager			
Checked By:	Checked By: G MCGRANN			Accreditation No.2415				Appro	Approved Signatory Date: 10/12/2020			
D104/2	D 1	2.1	1	Accreditation No.2415				Date: 1	Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD

Address PO BOX 197, WYNNUM CENTRAL QLD 4178

Project CAPESTONE ESTATE STAGE 12B2

Feature ALLOTMENT FILL
Location SEE BELOW
Date Tested 01/12/2020

Report No. 46113 Job No. 1418 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %
22493	14:30	150	LOT 10 3m Front bdy, 1m Left bdy 1.7m below F.L.	22493 Material Des	- cription: BROW	14.0 N SH TV CI	14.5	Adj. 0.5 DRY	2.10	<del>Adj.</del> 2.15	97.5
22494	15:00	150	LOT 11 4m Front bdy, 1m Right bdy	22494	-	11.0	13.5	Adj. 2.5 DRY	2.07	<del>Adj</del> . 2.11	98.0
			1.1m below F.L.	Material Des	cription: BROW	N SILTY CI	LA Y	<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:			<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:			l			
								<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:					Ţ	
								<del>Adj</del> .		<del>Adj</del> .	
				Material Des	cription:					Ţ.	
Remarks:								Specif	ied Density	Ratio 95% STD	
Test Procedu	ires: AS128	39 5.1.1, 5.3	3.1, 5.7.1, 2.1.1	Determined of	on material finer	than 19mm					
	Prepared By: G MCGRANN Date: 10/12/2020			NATA Accredited for compliance with ISO/IEC 17025 – Testing.				Greg N	ЛcGrann/Mc		150
Checked By:	Checked By: G MCGRANN			Accreditation No.2415				Approved Signatory Date: 10/12/2020			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD
Address PO BOX 197, WYNNUM CENTRAL QLD 4178
CAPESTONE ESTATE STAGE 12B2

Feature ALLOTMENT FILL Location SEE BELOW 02/12/2020

Report No. 46114 Job No. 1418 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %	
			LOT 10					<del>Adj</del> .		<del>Adj.</del>		
22522	10:45	150	7m Front bdy, 1m Left bdy	22522	-	12.5	12.5	-	2.11	2.15	98.0	
			0.5m below F.L.	Material Des	cription: BROW	N SILTY SA	NDY CLAY		FRAGMENT			
			LOT 11					<del>Adj</del> .		<del>Adj</del> .		
22523	11:00	150	9m Front bdy, 1m Right bdy	22523	-	12.5	16.5	4.0 DRY	2.06	2.05	100.5	
			F.L.	Material Des	cription: BROW	N SILTY CL	_AY					
								<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:			<u>I</u>				
								<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:			<u>l</u>				
								<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:			1				
					•			<del>Adj</del> .		<del>Adj</del> .		
				Material Des	cription:							
Remarks:								Specif	ied Density	Ratio 95% STD		
Test Procedu	ires: AS128	89 5.1.1 <sub>,</sub> 5.3	3.1, 5.7.1, 2.1.1	Determined of	on material finer	than 19mm						
	Prepared By: G MCGRANN Date: 11/12/2020			NATA Accredited for compliance with ISO/IEC 17025 – Testing.				g. Grea N	Greg McGrann/Manager			
Checked By:	Checked By: G MCGRANN				Accreditation No.2415				Approved Signatory Date: 11/12/2020			



# **APPENDIX D**

Level 1 Report

Capestone Estate Stage 12B

Lot 1394 Dated 13<sup>th</sup> of

November 2018





20/1191 Anzac Ave
Kallangur, Q. 4503
Ph. (07) 3285 6536
Email. brissoil@bigpond.net.au
\_Geotechnical Testing Services.

Connemar Pty. Ltd. ABN 50 065 093 647

Job No.1418

13 November 2018

BMD Constructions Pty Ltd PO Box 197 WYNNUM CENTRAL QLD 4178

Attn Glen Fuller

**RE:** CAPESTONE ESTATE – STAGE 12B (LOT 1394)

(Allotment Fill – Geotechnical Inspection & Testing)

#### **SCOPE**

Brisbane Soil Testing were commissioned by BMD Constructions Pty Ltd to provide geotechnical inspection and testing of the allotment earthworks to Lot 1394 on the above stage subdivision.

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) remove unsuitable materials
- (iii) inspect and carry out compaction control testing of placed fill materials

#### CONTROL INSPECTION AND TESTING

An inspection of the areas to be filled was carried out on 21 March 2014 and on an ongoing basis as the job progressed, by Brisbane Soil Testing staff.

On-site cut materials were used for filling and these materials were generally placed in 0.20m loose horizontal layers and compacted with an 815/825 compactor and vibrating pad foot roller.

Thirty-nine field density tests were carried between 19 July 2014 and 14 August 2018. These tests recorded Dry Density Ratios between 98.0% and 103.5% relative to the standard compaction test and field moisture contents within –4.0% and +2.5% of their respective optimum moisture contents, AS1289.5.1.1/5.7.1.

Attached documents B37/11 and B194/0 (Report Nos. 40780 - 40784, 40787, 40798 - 40800, 42439, 42440, 42442, 42570, 42574 and 42577) provide full test data for the compaction control tests.

#### **CONCLUSION**

Based on the test results and site inspections, we conclude that the fill foundation is considered to comply with requirements of Table 5.1- Item 2 of AS3798-2007 and the project specifications.

We confirm that all vegetation and topsoil was 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.

**GREG McGRANN** 

**BRISBANE SOIL TESTING** 

#### EARTHWORKS SUMMARY REPORT CAPESTONE ESTATE – STAGE 12B LOT 1394

#### LOCATIONS ON ATTACHED PLAN

Field Density Results Page 1of 1

Test No.	Date Tested	Test Location	Dry Density Ratio % AS1289 5.4.1 (Standard)
144 (86244)	19.07.14	Location on attached plan. R.L.7.23.	103.5
145 (86245)	19.07.14	Location on attached plan. R.L.7.91.	100.0
146 (86246)	19.07.14	Location on attached plan. R.L.7.10.	98.5
147 (86247)	19.07.14	Location on attached plan. R.L.7.44.	97.0
148 (86248)	21.07.14	Location on attached plan. R.L.8.10.	99.5
149 (86249)	21.07.14	Location on attached plan. R.L.7.60.	103.0
150 (86250)	21.07.14	Location on attached plan. R.L.7.90.	99.5
151 (86294)	23.07.14	Location on attached plan. R.L.8.33.	101.0
152 (86295)	23.07.14	Location on attached plan. R.L.8.39.	101.0
154 (86297)	23.07.14	Location on attached plan. R.L.8.59.	98.0
155 (86298)	23.07.14	Location on attached plan. R.L.8.02.	100.0
156 (86299)	23.07.14	Location on attached plan. R.L.6.74.	100.0
157 (86300)	23.07.14	Location on attached plan. R.L.7.30.	103.0
160 (86303)	24.07.14	Location on attached plan. R.L.7.61.	100.0
164 (86307)	24.07.14	Location on attached plan. R.L.7.95.	100.0
165 (86308)	24.07.14	Location on attached plan. R.L.8.13.	103.0
176 (86397)	29.07.14	Location on attached plan. R.L.8.02.	99.0
177 (86398)	29.07.14	Location on attached plan. R.L.8.09.	101.5
225 (97217)	28.07.15	Location on attached plan. R.L.8.90.	99.0
227 (97219)	28.07.15	Location on attached plan. R.L.9.11.	100.5
229 (97221)	28.07.15	Location on attached plan. R.L.8.84.	102.0
230 (97222)	28.07.15	Location on attached plan. R.L.9.22.	98.5
231 (97293)	29.07.15	Location on attached plan. R.L.9.40.	99.5
232 (97294)	29.07.15	Location on attached plan. R.L.9.73.	103.0
238 (97389)	03.08.15	Location on attached plan. R.L.7.20.	99.0
445 (14060)	03.08.18	Location on attached plan. R.L.7.17.	100.0
446 (14061)	03.08.18	Location on attached plan. R.L.7.35.	99.5
447 (14062)	03.08.18	Location on attached plan. R.L.7.76.	101.5
448 (14063)	04.08.18	Location on attached plan. R.L.7.47.	101.0
449 (14065)	04.08.18	Location on attached plan. R.L.8.04.	102.5
450 (14088)	07.08.18	Location on attached plan. R.L.7.25.	101.0
451 (14089)	07.08.18	Location on attached plan. R.L.7.36.	100.5
452 (14090)	07.08.18	Location on attached plan. R.L.7.41.	102.0
453 (14091)	07.08.18	Location on attached plan. R.L.7.44.	103.5
454 (14112)	08.08.18	Location on attached plan. R.L.8.32.	101.5
455 (14114)	08.08.18	Location on attached plan. R.L.8.68.	95.5
456 (14115)	08.08.18	Location on attached plan. R.L.8.99.	99.0
461 (14150)	11.08.18	Location on attached plan. R.L.7.52.	99.0
462 (14151)	11.08.18	Location on attached plan. R.L.8.30.	102.0
470 (14159)	14.08.18	Location on attached plan. R.L.8.73. Retest	99.0

In our opinion all fill on Lot 1394 has been placed in a controlled manner to achieve a minimum dry density ratio of 98% (AS1289.5.1.1/5.7.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. 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** 



**Brisbane Soil Testing** 20/1191 Anzac Ave Kallangur, Q. 4503 Ph. (07) 3285 6536

#### **TEST LOCATIONS**



20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

19/7/2014

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Customer PO BOX 197, WYNNUM CENTRAL OLD 4178 Address CAPESTONE ESTATE - FUTURE STAGE 11& 12 **Project** 

Feature Location Date Tested **BULK EARTHWORKS** SEE BELOW

Report No. Job No. Tested by

1418 GM

40780

Field Field Optimum Moisture Moisture Field Max. Dry Time Depth % Oversize Lab Moisture Test Location 19mm/37.5mm Moisture Variation Ratio Dry of of Drv Density Test No Compaction Content Density Content Density Ratio Test Test Sample No % No Wet Dry  $t/m^3$  $t/m^3$ mm Adi. Adi. 144 1.5 86244 16.5 DRY 91.0 1.82 8.00 150 LOC ON ATT PLAN 86244 15.0 1.76 103.5 Material Description: LIGHT BROWN SILTY SANDY CLAY R.L.7.23 145 Adj. Adi. 86245 16.0 86245 8.30 150 LOC ON ATT PLAN 16.0 100.0 1.78 1.78 100.0 Material Description: BROWN SILTY CLAY & ROCK FRAGMENTS R.L.7.91 Adj. Adi. 146 1.0 86246 9.00 150 LOC ON ATT PLAN 86246 15.0 14.0 WET 107.0 1.81 1.84 98.5 Material Description: REDDISH-BROWN SANDY CLAY & ROCK FRAGMENTS R.L.7.10 147 Adj. 1.0 86247 9.30 150 LOC ON ATT PLAN 86247 15.5 14.5 WET 107.0 1.78 1.83 97.0 Material Description: REDDISH-BROWN SANDY CLAY & ROCK FRAGMENTS R.L.7.44 Adj. Adj. Material Description: Adj. Adj. Material Description: Remarks:

Required Dry Density Ratio 95% STD

Test Procedures: AS1289 5.1.1,5.3.1, 5.4.1, 2.1.1 Prepared By: G MCGRANN Date:29.7.17 Checked By: R MCGRANN

ΝΔΤΔ Accredited for compliance with ISO/IEC 17025 - Testing.

Determined on material finer than 19mm

Accreditation No.2415

**Approved Signatory** Date:29.7.17

Grea McGrann/Manager

# Brisbane Soil Testing 20/1191 Anzac Ave Kallangur Q 4503

Ph.(07) 3285 6536

## FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

Customer	BMD CONSTRUCTIONS PTY LTD	Feature	BULK EARTHWORKS	Report No.	40781
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1418
Project	CAPESTONE ESTATE – FUTURE STAGE 11& 12	Date Tested	21/7/2014	Tested by	GM

Field Test N <sup>o</sup>	Time of Test	Depth of Test	Test Location	Lab Compaction		ersize 37.5mm	Field Moisture Content	Optimum Moisture Content	Moisture Variation %	Moisture Ratio %	Field Dry Density	Max. Dry Density	Dry Density Ratio
Sample N <sup>o</sup>		mm		No	Wet	Dry	%	%			t/m <sup>3</sup>	t/m <sup>3</sup>	%
148								<del>Adj</del> .				<del>Adj.</del>	
86248	8.00	150	LOC ON ATT PLAN	86248	-	-	17.0	17.0	-	100.0	1.77	1.78	99.5
			R.L.8.10	Material Des	cription:	BROW	N SILTY C			MENTS	T.	1	
149 86249	8.30	150	LOC ON ATT PLAN	86249			17.5	<del>Adj.</del> 16.0	1.5 WET	109.5	1.82	<del>Adj</del> . 1.77	102.0
80249	8.30	130	R.L.7.60	Material Des		DDOW				109.3	1.62	1.//	103.0
150			R.L.7.00	Material Des	(11) 	DROW	N SILI I G	Adj.		T		<del>Adj</del> .	
150 86250	9.00	150	LOC ON ATT PLAN	86250	_	_	16.5	15.0	1.5 WET	110.0	1.82	1.83	99.5
			R.L.7.90	Material Des	cription:	BROW	N SILTY G	RAVELLY	CLAY				
					1			Adj.				Adj.	
				Material Des	cription:								
								Adj.				Adj.	
				Material Des	cription:								
				Wateriar Bes				Adj.				Adj.	
				Material Des	cription:						1	I	
Remarks:									Rea	uired Dry De	ensity Ratio	95% STE	)
Test Procedu	ires: AS12	89 5.1.1,5.3.	1, 5.4.1, 2.1.1	Required Dry Density Ratio 95% ST  Determined on material finer than 19mm									
Prepared By Date:29.7.17	repared By: G MCGRANN			NATA	Accredite	ed for compl	iance with ISO/II	EC 17025 – Testi	ing. Grea	g McGrann/l	Manaaer	00	
	ecked By: R MCGRANN RMG			Accreditation No.	2415				Арр	roved Signat e:29.7.17	- /	Tiets wil	2

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

23/7/2017

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD
Address PO BOX 197, WYNNUM CENTRAL QLD 4178
Project CAPESTONE ESTATE – FUTURE STAGE 11& 12

Feature Location Date Tested

BULK EARTHWORKS SEE BELOW Report No.
Job No.
Tested by

40782 1418 AC JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test	Test Location	Lab Compaction NO	% Ov 19mm/3 Wet	37.5mm	Field Moisture Content	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density	Max. Dry Density	Dry Density Ratio
Sumpre 1		mm		No	wet	Dry	%	70			t/m <sup>3</sup>	t/m <sup>3</sup>	%
151								<del>Adj</del> .	4.0			<del>Adj.</del>	
86294	8.00	150	LOC ON ATT PLAN	86294	-	-	11.5	15.5	DRY	74.0	1.86	1.84	101.0
			R.L.8.33	Material Des	cription:	GREY-	BROWN S			Υ			
152								<del>Adj.</del>	0.5			<del>Adj</del> .	
86295	8.00	150	LOC ON ATT PLAN	86295	-	-	16.0	15.5	WET	103.0	1.88	1.86	101.0
			R.L.8.39	Material Des	cription:	BROW	N SILTY G	RAVELLY	CLAY				
153								<del>Adj.</del>	2.0			<del>Adj</del> .	
86296	8.30	150	LOC ON ATT PLAN	86296	-	-	12.5	14.5	DRY	86.0	1.78	1.87	95.0
			R.L.7.57	Material Des	cription:	BROW	N SILTY G	RAVELLY	CLAY				
154								Adj.	1.5			<del>Adj.</del>	
86297	8.30	150	LOC ON ATT PLAN	86297	-	-	13.0	14.5	DRY	89.5	1.80	1.84	98.0
			R.L.8.59	Material Des	cription:	BROW	N SILTY S	ANDY CLA	Υ				
155								Adj.	1.5			<del>Adj</del> .	
86298	9.00	150	LOC ON ATT PLAN	86298	-	-	15.0	16.5	DRY	91.0	1.79	1.79	100.0
			R.L.8.02	Material Des	cription:	BROW	N SILTY C	LAY		•		•	
156								<del>Adj</del> .	4.0			<del>Adj</del> .	
86299	9.00	150	LOC ON ATT PLAN	86299	-	-	13.0	17.0	DRY	76.5	1.77	1.77	100.0
			R.L.6.74	Material Des	cription:	LIGHT	RED-BRO	WN SILTY	CLAY				
Remarks:	1												
				Required Dry Density Ratio 95% STD									
Test Procedu	ires: AS128	39 5.1.1,5.3.	1, 5.4.1, 2.1.1	Determined	on mater	ial finer	than 19mm				•		
Prepared By				^									
Date:29.7.17	•							50 15005 E				11	
	25.7.17			NATA	Accredite	d for compl	iance with ISO/II	EC 17025 – Testi	<sup>ng.</sup> Greg	McGrann/N	Лanager		
Checked By:	R MCGRA	NN PM	\ \						Appr	oved Signat	ory (	1160 C	2~
Checked by.	n WCONAI	11	9	Accreditation No.	2415				Date	:29.7.17			

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

23/7/2014

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD

Address PO BOX 197, WYNNUM CENTRAL QLD 4178

Project CAPESTONE ESTATE – FUTURE STAGE 11& 12

Feature Location Date Tested BULK EARTHWORKS SEE BELOW Report No. 40783 Job No. 1418 Tested by AC

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Ov 19mm/3 Wet	ersize 37.5mm Dry	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
157 86300	9.30	150	LOC ON ATT PLAN R.L.7.30	86300 Material Des	- cription:	- LIGHT	14.0 RED-BRO	Adj. 17.0 WN SILTY	3.0 DRY CLAY	82.5	1.83	<del>Adj.</del> 1.78	103.0
158 86301	10.00	150	LOC ON ATT PLAN R.L.7.19	86301 Material Des	- cription:	- BROW	13.5 N SILTY C	Adj. 17.5 LAY	4.0 DRY	77.0	1.71	<del>Adj</del> . 1.76	97.0
159 86302	10.30	150	LOC ON ATT PLAN R.L.7.13	86302 Material Des	-	-	13.0	<del>Adj.</del> 16.0	3.0 DRY	81.5	1.74	<del>Adj</del> . 1.75	99.5
								Adj.				Adj.	
				Material Des	cription:			Adj.				Adj.	
				Material Des	cription:						1		
					-			Adj.				Adj.	
				Material Des	cription:			•			•		
Remarks:									Requ	iired Dry De	ensity Ratio	95% STD	)
Test Procedu	res: AS128	39 5.1.1,5.3.	1, 5.4.1, 2.1.1	Determined on material finer than 19mm									
Date:29.7.17	repared By: G MCGRANN ate:29.7.17			NATA	Accredite	d for compl	iance with ISO/II	EC 17025 – Testi	Greg	McGrann/I		// // // // // // // // // // // // //	
Checked By:	cked By: R MCGRANN RMG			Accreditation No.2	2415					oved Signat :29.7.17	ory (	_ 1,000 , 40(	

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

Customer Address **Project** 

BMD CONSTRUCTIONS PTY LTD

PO BOX 197, WYNNUM CENTRAL OLD 4178

CAPESTONE ESTATE - FUTURE STAGE 11& 12

Feature Location

Date Tested

**BULK EARTHWORKS** 

SEE BELOW 24/7/2014

Report No. 40784 Job No. Tested by

1418 JM AC

Max. Field Field Optimum Moisture Moisture Field Dry Time Depth % Oversize Lab Moisture Test Location 19mm/37.5mm Moisture Variation Ratio Dry of of Drv Density Test No Compaction Content Density Content Density Ratio Test Test Sample No % No Wet Dry  $t/m^3$  $t/m^3$ mm Adi. Adi. 160 86303 14.5 100.0 86303 8.00 150 LOC ON ATT PLAN 14.5 1.83 1.81 100.0 Material Description: LIGHT RED-BROWN SILTY CLAY R.L.7.61 161 Adj. Adi. 3.0 86304 12.0 86304 8.00 150 LOC ON ATT PLAN 15.0 DRY 80.0 1.75 1.83 95.5 Material Description: BROWN SILTY CLAY R.L.7.57 Adi. Adi. 162 3.0 86305 8.30 150 LOC ON ATT PLAN 86305 10.0 13.0 DRY 77.0 1.74 1.77 98.5 Material Description: GREY-BROWN SILTY CLAY R.L.7.40 163 Adj. 1.5 86306 8.30 150 LOC ON ATT PLAN 86306 13.5 15.0 DRY 90.0 1.83 1.83 100.0 Material Description: BROWN SILTY CLAY R.L.8.04 164 Adj. 1.5 Adj. 13.5 86307 9.00 150 LOC ON ATT PLAN 86307 15.0 DRY 90.0 1.83 1.83 100.0 Material Description: RED-BROWN SILTY CLAY R.L.7.95 165 Adj. 0.5 Adj. LOC ON ATT PLAN 86308 15.5 DRY 97.0 1.82 86308 9.30 150 15.0 1.77 103.0 Material Description: RED-BROWN CLAY R.L.8.13

Remarks:

Test Procedures: AS1289 5.1.1,5.3.1, 5.4.1, 2.1.1 Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:29.7.17

Checked By: R MCGRANN

ΝΔΤΔ Accredited for compliance with ISO/IEC 17025 - Testing.

Accreditation No.2415

Grea McGrann/Manager **Approved Signatory** 

Required Dry Density Ratio 95% STD

Date:29.7.17

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

29/7/2014

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Project CAPESTONE ESTATE – FUTURE STAGE 11& 12

Feature Location Date Tested

**BULK EARTHWORKS SEE BELOW** 

Report No. 40787 Job No. Tested by AC

1418

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Ov 19mm/3	ersize 37.5mm Dry	Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
174	0.00	150	A O C O M A TITE DI A M	0.5205			15.5	Adj.		100.0	1.70	Adj.	00.0
86395	8.00	150	LOC ON ATT PLAN	86395		- DDOW	15.5	16.0	-	100.0	1.78	1.80	99.0
177			R.L.7.92	Material Des	cription:	BROW	N SILTY SA				1	A 4:	
175 86396	8.30	150	LOC ON ATT PLAN	86396			14.0	<del>Adj.</del> 17.5	3.5 DRY	80.0	1.71	<del>Adj</del> . 1.79	95.5
80390	8.30	130	R.L.7.96	Material Des	-	I ICUT					1./1	1.79	95.5
176			K.L.7.90	Wateriai Des	[ [ [ ]	LIGHT	UKE I -DK	Adj.	2.0	LAI	1	Adj.	
86397	9.00	150	LOC ON ATT PLAN	86397	_	_	14.0	16.0	DRY	87.5	1.76	1.78	99.0
00371	7.00	130	R.L.8.02	Material Des	crintion:	BROW	1			07.3	1.70	1.70	77.0
177			K.L.0.02	Widterial Des		DRO W	TV DILIT O	Adj.	CLITT			Adj.	
86398	9.30	150	LOC ON ATT PLAN	86398	_	_	17.0	17.0	_	100.0	1.80	1.77	101.5
	,		R.L.8.09	Material Des	cription:	BROW		RAVELLY	CLAY				
								Adj.				Adj.	
				Material Des	crintion								
				Waterial Des		I		Adj.				Adj.	
								1101.				110).	
				Material Des	cription:	<u> </u>		<u> </u>					
Remarks:				•					Requ	iired Dry De	ensity Ratio	95% STD	)
Test Procedu	res: AS128	39 5.1.1,5.3.	1, 5.4.1, 2.1.1	Determined of	on mater	ial finer	than 19mm			•	•		
Prepared By: Date:29.7.17	Prepared By: G MCGRANN Date:29.7.17			NATA	Accredite	d for compl	iance with ISO/II	EC 17025 – Test	ing. Grea	McGrann/N	Manaaer	00	0
Checked By:	necked By: R MCGRANN			Accreditation No.	2415				Appr	oved Signat :29.7.17		Tiebs W.	a

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

28/7/2015

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 **Project** CAPESTONE ESTATE – FUTURE STAGE 11& 12

Feature Location Date Tested **BULK EARTHWORKS** SEE BELOW

Report No. 40798 Job No. Tested by

**Approved Signatory** 

Date:31.7.17

1418 JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Ov 19mm/3 Wet		Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
225 97217	8.00	150	LOC ON ATT PLAN	97217 Material Dec	- -	-	14.5	Adj. 14.5	- DV CLAV 8	100.0	1.81	Adj. 1.83	99.0
226 97218	8.30	150	R.L.8.90 LOC ON ATT PLAN R.L.8.63	97218 Material Des	-	=	11.0	<del>Adj.</del> 12.5	1.5 DRY	88.0	1.90	<del>Adj</del> . 1.92	99.0
227 97219	9.00	150	LOC ON ATT PLAN R.L.9.11	97219 Material Des	-	-	21.0	Adj. 22.0	1.0 DRY	95.5	1.64	Adj. 1.63	100.5
228 97220	9.30	150	LOC ON ATT PLAN R.L.9.34	97220 Material Des	-	-	17.5	<del>Adj</del> . 18.0	0.5 DRY	97.0	1.78	<del>Adj.</del> 1.78	100.0
229 97221	10.00	150	LOC ON ATT PLAN R.L.8.84	97221 Material Des	-	-	12.0	<del>Adj</del> . 14.0	2.0 DRY	85.5	1.89	<del>Adj</del> . 1.85	102.0
230 97222	10.30	150	LOC ON ATT PLAN R.L.9.22	97222 Material Des	-	-	17.5	<del>Adj</del> . 16.5	1.0 WET	106.0	1.77	<del>Adj</del> . 1.80	98.5
Remarks:	AC126	0051152	1.541.211	Determined		: -1 <i>C</i> :	41 10		Requ	ired Dry De	ensity Ratio	95% STD	)
Prepared By Date:31.7.17	: G MCGRA		1, 5.4.1, 2.1.1	NATA NATA			iance with ISO/II	EC 17025 – Testi	ing. Greg	McGrann/N	Лanager	00	

Accreditation No.2415

Checked By: R MCGRANN

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd. ABN 50 065 093 647 **Geotechnical Testing Services** 

Email. brissoil@bigpond.net.au

Customer Address Project

BMD CONSTRUCTIONS PTY LTD

PO BOX 197, WYNNUM CENTRAL QLD 4178

CAPESTONE ESTATE – FUTURE STAGE 11&12

Feature **BULK EARTHWORKS** Location

**SEE BELOW** Date Tested 29/7/2015

Report No. 40799 Job No.

1418

Tested by GM JM

Field Test N <sup>O</sup>	Time of	Depth of	Test Location	Lab Compaction	% Ove 19mm/3		Field Moisture	Optimum Moisture Content	Moisture Variation	Moisture Ratio	Field Dry	Max. Dry	Dry Density
Sample N <sup>o</sup>	Test	Test mm		No	Wet	Dry	Content %	%	%	%	Density t/m <sup>3</sup>	Density t/m <sup>3</sup>	Ratio %
231 97293	10.00	150	LOC ON ATT PLAN	97293	-	-	13.0	<del>Adj</del> . 13.5	0.5 DRY	96.5	1.87	<del>Adj.</del> 1.88	99.5
			R.L.9.40	Material Des	cription:	LIGHT	BROWN S		DY CLAY &	k ROCK FR	AGMENT		
232 97294	10.20	150	LOC ON ATT PLAN	97294	-	-	14.0	<del>Adj.</del> 15.0	1.0 DRY	93.5	1.86	<del>Adj</del> . 1.81	103.0
			R.L.9.73	Material Des	cription:	LIGHT	BROWN S	ILTY SAN	DY CLAY &	& ROCK FR	AGMENT	S.	
233 97295	13.00	150	LOC ON ATT PLAN	97295	-	-	16.5	Adj. 18.0	1.5 DRY	91.5	1.66	Adj. 1.75	95.0
			R.L.7.21	Material Description: GREY-BROWN SILTY CLAY.									
234 97296	13.20	150	LOC ON ATT PLAN	97296	-	-	23.0	Adj. 21.5	1.5 WET	107.0	1.58	<del>Adj.</del> 1.63	97.0
			R.L.7.70	Material Des	cription:	GREY-	BROWN C	LAY.			•	-	
								Adj.				Adj.	
				Material Des	cription:			1	ı		1	1	
								Adj.				Adj.	
				Material Des	cription:			<u> </u>			<u> </u>		
Remarks:					r				Requ	iired Dry De	ensity Ratio	o 95% STE	)
Test Procedu	ires: AS128	Determined of	on materi	al finer	than 19mm				•				
Date:31.7.17	repared By: G MCGRANN pate:31.7.17			NATA	Accredited	l for compl	iance with ISO/II	EC 17025 – Testi	Greg	McGrann/I	- /		0
	Checked By: R MCGRANN RMG			Accreditation No.2	2415					oved Signat :31.7.17	ory	< 1,000 1 00(	2

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer Address Project BMD CONSTRUCTIONS PTY LTD

PO BOX 197, WYNNUM CENTRAL QLD 4178

CAPESTONE ESTATE – FUTURE STAGE 11& 12

Feature BULK EARTHWORKS Location SEE BELOW

Date Tested 3/8/2015

Report No. 40 Job No. 14

40800 1418

Tested by JM

Field Test NO	Time of Test	Depth of Test	Test Location	Lab Compaction	% Ove 19mm/3	37.5mm	Field Moisture Content	Optimum Moisture Content	Moisture Variation %	Moisture Ratio %	Field Dry Density	Max. Dry Density	Dry Density Ratio
Sample N <sup>O</sup>		mm		$N_0$	Wet	Dry	%	%			t/m <sup>3</sup>	$t/m^3$	%
235								<del>Adj</del> .	1.5			<del>Adj.</del>	
97386	8.00	150	LOC ON ATT PLAN	97386	-	-	21.0	22.5	DRY	93.5	1.58	1.65	96.0
			R.L.7.00	Material Des	cription:	REDDI	SH-BROW						
236								Adj.	1.5			<del>Adj</del> .	
97387	8.30	150	LOC ON ATT PLAN	97387	-	-	17.0	18.5	DRY	92.0	1.69	1.74	97.0
			R.L.7.10	Material Des	cription:	DARK	BROWN S		DY CLAY	•			
237								Adj.				Adj.	
97388	9.00	150	LOC ON ATT PLAN	97388	-	-	16.5	16.5	-	100.0	1.70	1.78	95.5
			R.L.7.30										
238		4.70						3	2.0				00.0
97389	9.30	150	LOC ON ATT PLAN	97389	-	-	9.5	11.5	DRY	82.5	1.94	1.96	99.0
			R.L.7.20	Material Des	cription:	BROW	N ASNDY			MENTS			
239								Adj.	1.0			Adj.	
97390	10.00	150	LOC ON ATT PLAN	97390	-	-	18.0	19.0	DRY	94.5	1.69	1.72	98.5
			R.L.6.90	Material Des	cription:	BROW	N SILTY C	1		IENTS	1		
240	10.20	150	LOGON APPENIAN	07201			25.0	Adj.	1.5	1065	1.50	Adj.	0= =
97391	10.30	150	LOC ON ATT PLAN	97391	-	- CDEW	25.0	23.5	WET	106.5	1.58	1.62	97.5
D 1			R.L.6.80	Material Des	cription:	GREY-	BROWNC	LAY					
Remarks:									Requ	iired Dry De	ensity Ratio	95% STE	)
Test Procedu	ires: AS128	39 5.1.1,5.3.	1, 5.4.1, 2.1.1	Determined of	on materi	ial finer	than 19mm						
Prepared By Date:31.7.17	Prepared By: G MCGRANN Date:31.7.17			NATA	Accredite	d for compl	iance with ISO/II	EC 17025 – Testi	ing. Greo	McGrann/N	Manager	00	0
Checked By:	Checked By: R MCGRANN RMG			Accreditation No.2	2415				Appr	oved Signat :31.7.17	- /	(1) (C)	a

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer
Address
Project
PO BOX 197, WYNNUM CENTRAL QLD 4178
CAPESTONE ESTATE – STAGE 12B

Feature Location Date Tested ALLOTMENT FILL SEE BELOW 03/08/2018

Report No. 42439 Job No. 1418 Tested by JM

Date:14/08/2018

Field Optimum Moisture Field Field Time Depth % Oversize Moisture Max. Drv Lab Moisture Ratio Dry **Test Location** 19mm/37.5mm Moisture Variation Density of of Dry Test NO Compaction Content Density Test Test Content Density Ratio Sample No No Wet Drv  $t/m^3$ mm  $t/m^3$ Adj. Adj. 445 LOT 1394 0.5 LOC ON ATT PLAN 23.0 DRY 98.0 14060 10.00 150 14060 22.5 1.66 1.66 100.0 Material Description: LIGHT REDDISH-GREY SILTY CLAY R.L.7.17 LOT 1394 Adj. Adj. 446 1.0 LOC ON ATT PLAN 14061 17.0 18.0 DRY 1.78 99.5 14061 10.20 150 94.5 1.79 Material Description: REDDISH-BROWN GREY SILTY SANDY CLAY R.L.7.35 LOT 1394 Adi. Adi. 447 1.0 DRY 94.0 1.82 14062 10.50 LOC ON ATT PLAN 14062 16.0 17.0 1.85 101.5 150 Material Description: REDDISH-BROWN & GREY SILTY SANDY CLAY R.L.7.76 Adj. Material Description: Adj. Adj. Material Description: Adj. Adj. Material Description: Remarks: Required Dry Density Ratio 98% STD Test Procedures: AS1289 5.1.1,5.3.1, 5.4.1, 2.1.1 Determined on material finer than 19mm Prepared By: G MCGRANN Date: 14/08/2018 ΝΔΤΔ Accredited for compliance with ISO/IEC 17025 - Testing. Grea McGrann/Manager Approved Signatory Checked By: R MCGRANN

Accreditation No.2415

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer
Address
Project

BMD CONSTRUCTIONS PTY LTD
PO BOX 197, WYNNUM CENTRAL QLD 4178
CAPESTONE ESTATE – STAGE 12B

Feature Location Date Tested ALLOTMENT FILL SEE BELOW 04/08/2018 Report No. 42440 Job No. 1418 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction NO	% Ove 19mm/3 Wet		Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
448			LOT 1394					<del>Adj</del> .	0.5			<del>Adj.</del>	
14063	10.00	150	LOC ON ATT PLAN	14063	-	-	15.0	15.5	DRY	97.0	1.86	1.84	101.0
			R.L.7.47	Material Des	cription:	LIGHT	REDDISH-B	ROWN SILT	Y SANDY (	CLAY & ROC	K FRAGM		
449			LOT 1394					<del>Adj.</del>	0.5			<del>Adj</del> .	
14065	11.00	150	LOC ON ATT PLAN	14065	-	-	20.0	20.5	DRY	97.5	1.75	1.71	102.5
			R.L.8.04	Material Des	cription:	REDDI	SH-GREY	SILTY CLA	Υ				
								Adj.				Adj.	
				Material Des	cription:						<u> </u>		
								Adj.				Adj.	
				Matarial Dag									
				Material Des	cription:	l		Adj.		I	1	Adj.	
								Auj.				Auj.	
				Material Des	cription:	<u>I</u>				L	1	1	
								Adj.				Adj.	
				MarialDa							1		
D 1				Material Des	cription:								<u> </u>
Remarks:				Required Dry Density Ratio 98% STD							)		
Test Procedu	ires: AS128	39 5.1.1,5.3	.1, 5.4.1, 2.1.1	Determined on material finer than 19mm									
Prepared By		NN											
	te: 14/08/2018  ecked By: R MCGRANN R			NATA Accreditation No.2		d for compl	iance with ISO/II	EC 17025 – Testi	App	g McGrann/l roved Signat e: 14/08/201	ory	//////////////////////////////////////	a

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD
Address PO BOX 197, WYNNUM CENTRAL QLD 4178
Project CAPESTONE ESTATE – STAGE 12B

Feature ALL Location SEE Date Tested 07/0

ALLOTMENT FILL SEE BELOW 07/08/2018 Report No. 42442 Job No. 1418 Tested by JM AC

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Ov 19mm/3		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
450 14088	10.00	150	LOT 1394 LOC ON ATT PLAN	14088	-	-	15.0	<del>Adj</del> . 14.0	1.0 WET	107.0	1.85	<del>Adj.</del> 1.83	101.0
			R.L.7.27	Material Des	cription:	LIGHT	REDDISH-	BROWN &	GREY SII	TY SANDY	CLAY.		
451 14089	10.00	150	LOT 1394 LOC ON ATT PLAN	14089	_	_	16.0	<del>Adj</del> . 14.5	1.5 WET	110.5	1.79	<del>Adj</del> . 1.78	100.5
			R.L.7.36	Material Des	cription:	LIGHT				_			
452 14090	12.20	150	LOT 1394 LOC ON ATT PLAN	14090	-	-	13.5	Adj. 14.0	0.5 DRY	96.5	1.82	<del>Adj.</del> 1.78	102.0
			R.L.7.71	Material Des	cription:	LIGHT	REDDISH	BROWN &	GREY SII	TY SANDY	CLAY.		
453 14091	12.20	150	LOT 1394 LOC ON ATT PLAN	14091	-	-	12.5	<del>Adj</del> . 13.5	1.0 DRY	92.5	1.94	<del>Adj</del> . 1.87	103.5
			R.L.7.84	Material Des	cription:	LIGHT	REDDISH-	BROWN &	GREY SII	TY SANDY	CLAY.		
								Adj.				Adj.	
				Material Des	cription:					•			
								Adj.				Adj.	
				Material Des	cription:								
Remarks:				Material Description:  Required Dry Density Ratio 98% STD						)			
Test Procedu	res: AS128	39 5.1.1,5.3.	1, 5.4.1, 2.1.1	Determined on material finer than 19mm									
Date:14/08/	epared By: G MCGRANN ate:14/08/2018			NATA	Accredite	d for compl	iance with ISO/II	EC 17025 – Testi	Greg	g McGrann/N	- /		0
	necked By: R MCGRANN			Accreditation No.	2415					roved Signat e14/08/2018	•	< pec 1 (c).	2

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD Feature
Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Location
Project CAPESTONE ESTATE – STAGE 12B Date Tested

Feature ALLOTMENT FILL
Location SEE BELOW
Date Tested 08/08/2018

Report No. 42570 Job No. 1418 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Ov 19mm/3 Wet		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
454			LOT 1394					<del>Adj</del> .	2.0			<del>Adj.</del>	
14112	9.15	150	LOC ON ATT PLAN	14112	-	-	16.0	14.0	WET	114.5	1.88	1.85	101.5
			R.L.8.32	Material Des	cription:	DARK	BROWN S			ROCK FR	AGMENT		
455			LOT 1394					<del>Adj</del> .	2.5			<del>Adj</del> .	
14114	11.30	130	LOC ON ATT PLAN	14114	-	-	17.5	15.0	WET	116.5	1.75	1.83	95.5
			R.L.8.68	Material Des	cription:	BROW	N SOME G	REY SILTY	CLAY &	ROCK FRA	GMENTS.		
456			LOT 1394					<del>Adj.</del>	1.5			<del>Adj.</del>	
14115	13.50	150	LOC ON ATT PLAN	14115	-	-	16.0	14.5	WET	110.5	1.84	1.86	99.0
			R.L.8.99	Material Des	cription:	BROW	N SOME G	REY SILTY	CLAY &	ROCK FRA	GMENTS.		
								Adj.				Adj.	
				Material Des	cription:			<u> </u>			<u> </u>	1	
								Adj.				Adj.	
				Material Des	cription:					<u> </u>	<u>.                                    </u>		
								Adj.				Adj.	
				Material Des	cription:								
Remarks:				Required Dry Density Ratio 98% STD							)		
Test Procedu	res: AS128	9 5.1.1,5.3.	1, 5.4.1, 2.1.1	Determined on material finer than 19mm									
	repared By: <i>G MCGRANN</i> ate:25/09/2018			NATA	Accredite	d for compl	iance with ISO/II	EC 17025 – Testi	ng. Cros	g McGrann/N	Managar	00	0
Checked By:	necked By: R MCGRANN RMG		Accreditation No.2	2415	•			Арр	roved Signat e:25/09/2018	ory	Tiebs W(	a	

20/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

Customer BMD CONSTRUCTIONS PTY LTD Feature ALLOTMENT FILL Report No. 42574 PO BOX 197, WYNNUM CENTRAL QLD 4178 Location **SEE BELOW** Job No. 1418 Address Project CAPESTONE ESTATE – STAGE 12B Date Tested 11/08/2018 Tested by JM

Field Test N <sup>o</sup> Sample N <sup>o</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>		rersize 37.5mm Dry	Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m <sup>3</sup>	Max. Dry Density t/m <sup>3</sup>	Dry Density Ratio %
461 14150	7.30	150	LOT 1394 LOC ON ATT PLAN R.L.7.52	14150 Material Des	-	- DEDDI	16.5	Adj. 19.0	2.5 DRY	87.0	1.72	<del>Adj.</del> 1.74	99.0
462 14151	10.00	150	LOT 1394 LOC ON ATT PLAN	14151	-	-	14.0	<del>Adj</del> . 14.0	-	100.0	1.93	<del>Adj</del> . 1.89	102.0
			R.L.8.30	Material Des	cription:	REDDI	SH-BROW	N SANDY (	CLAY & RO	OCK FRAG	MENTS	Adj.	
				Material Des	cription:			Adj.				Adj.	
				Material Des	cription:			Adj.				Adj.	
				Material Description:  Adj.						<u> </u>	Adj.		
				Material Des	cription:			Auj.				Auj.	
Remarks:						. 1 %	1 10		Requ	iired Dry De	ensity Ratio	98% STD	)
Test Procedures: AS1289 5.1.1,5.3.1, 5.4.1, 2.1.1  Prepared By: <i>G MCGRANN</i> Date: 25/09/2018  Checked By: <i>R MCGRANN</i>			Determined on material finer than 19mm  Accredited for compliance with ISO/IEC 17025 – Testing.  Accreditation No.2415						Greg McGrann/Manager Approved Signatory Date: 25/09/2018				

## Brisbane Soil Testing 20/1191 Anzac Ave

0/1191 Anzac Ave Kallangur Q 4503 Ph.(07) 3285 6536

#### HILF DENSITY RATIO REPORT

Connemar Pty. Ltd.
ABN 50 065 093 647
Geotechnical Testing Services

Email. brissoil@bigpond.net.au

BMD CONSTRUCTIONS PTY LTD Feature ALLOTMENT FILL Report No. 42577 Customer Address PO BOX 197, WYNNUM CENTRAL QLD 4178 Location SEE BELOW Job No. 1418 Project CAPESTONE ESTATE - STAGE 12B Date Tested 14/08/2018 Tested by JM

Field Test N <sup>O</sup> Sample N <sup>O</sup>	Time of Test	Depth of Test mm	Test Location	Lab Compaction N <sup>O</sup>	% Oversize 19mm/37.5mm Wet Basis		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Field Wet Density t/m <sup>3</sup>	Peak Converted Wet Density t/m <sup>3</sup>	Hilf Density Ratio %
470			LOT 1394					Adj.	1.0		<del>Adj.</del>	
14159	8.20	150	LOC ON ATT PLAN	14159	-	-	16.5	15.5	WET	2.12	2.14	99.0
RETEST			R.L.8.73	Material Description: LIGHT GREY-BROWN SILTY SANDY CLAY.								
								Adj.			Adj.	
				Material Description:							L	
								Adj.			Adj.	
				Material Description:								
								Adj.			Adj.	
Material Description:												
								Adj.			Adj.	
				Material Description:								
								Adj.			Adj.	
				Material Des	cription:							
Remarks: Te	est 14159 is	a retest for	r test 14114.	-	•				Spec	cified Density	y Ratio 98% STD	
Test Procedures: AS1289 5.7.1,5.3.1, 5.4.1, 2.1.1			Determined on material finer than 19mm									
Prepared By: G MCGRANN Date:25/09/2018			NATA Accredited for compliance with ISO/IEC 17025 – Testing.					ing. Groo	Greg McGrann/Manager			
Checked By: R MCGRANN			Accreditation No.2415					Appr	Approved Signatory Date:25/09/2018			