



Brisbane Soil Testing

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.1643

28 March 2017

BMD Urban Pty Ltd

PO Box 197

WYNNUM CENTRAL QLD 4178

Attn Alan Guthrie

RE: CANNON HILL COMMUNITY LINKS – STAGE 2 (Revised Report)

(Allotment Fill, Road Embankment Fill and Pad Mount Transformer Backfill –
Geotechnical Inspection & Testing)

This report supersedes Cannon Hill Community Links Stage 2 Level 1 report dated 23.2.17.

SCOPE

Brisbane Soil Testing were commissioned by BMD Urban Pty Ltd to provide geotechnical inspection and testing of the allotment earthworks, embankment fill on Munce Place CH20-CH110, and backfill to the pad mount transformer 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 11 October 2016 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 825 compactor and vibrating pad foot roller.

Seventy-four field density tests were carried between 14 October 2016 and 14 March 2017. These tests recorded Dry Density Ratios between 95.0% and 106.5% relative to the standard compaction test and field moisture contents within -3.5% and +4.5% of their respective optimum moisture contents, AS1289.5.1.1.

The location of all allotment tests are shown on the attached Earthworks Summary Report sketches.

The test location of the pad mount transformer backfill is shown on the attached plan titled Transformer Pad Backfill, Drawing no.CE203.

The location of all embankment tests are shown on the attached plan titled Embankment Fill, Drawing No.CE202.

Attached documents B37/10 and B37/11 (Report Nos. 38797, 38798, 38825, 38827, 38830, 38831, 38889, 38923, 38924, 38926, 38928, 38929, 38932, 39659, 38935, 38937, 38983, 39033, 39034, 39038, 39039 39040 39934 39935 and 39967) 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.



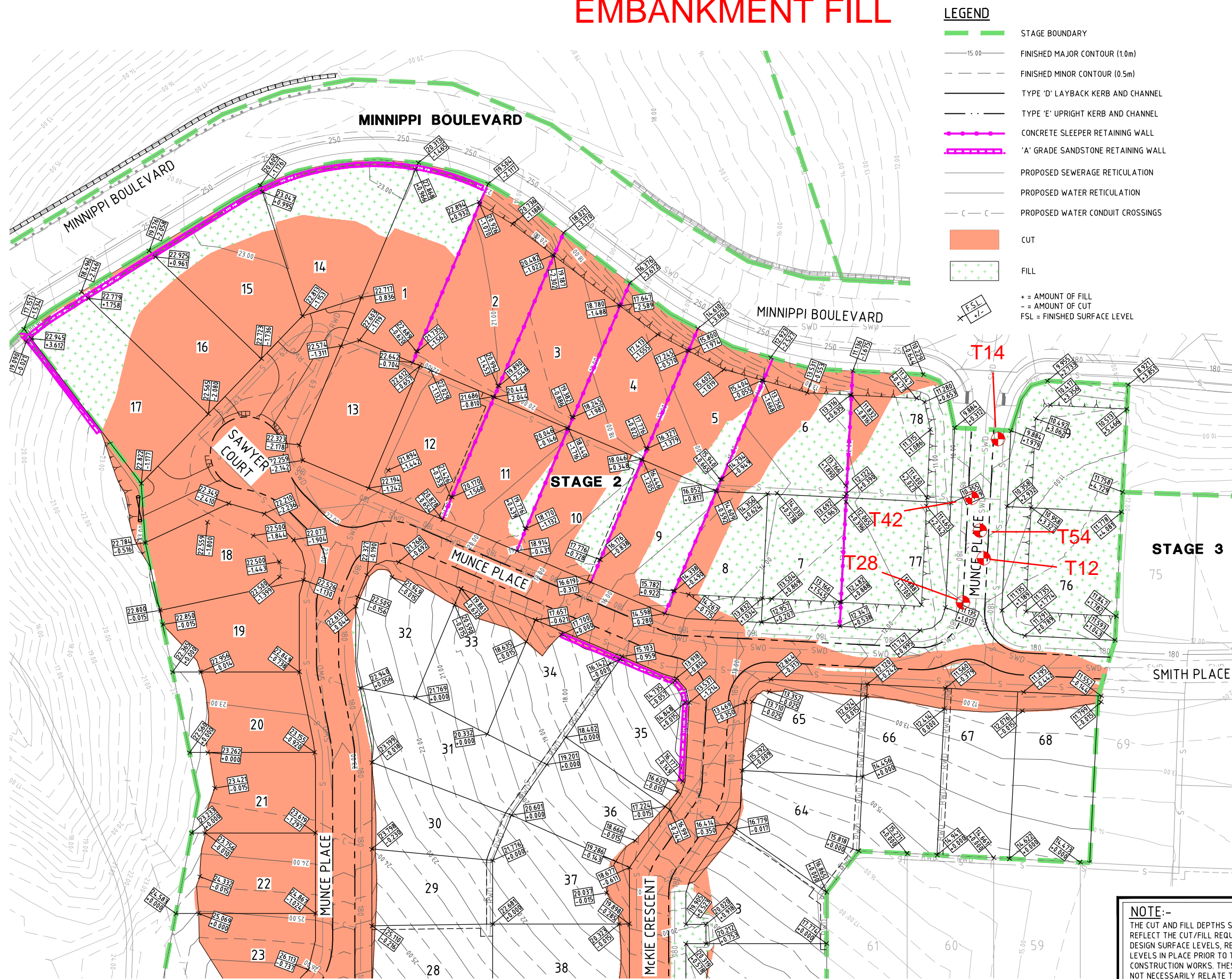
GREG McGRANN
BRISBANE SOIL TESTING



Brisbane Soil Testing

20/1191 Anzac Ave
Kallangur, Q. 4503

EMBANKMENT FILL



INSERT
SCALE 1:500

NOTE:-
FOR EROSION AND SEDIMENT CONTROL DETAILS
REFER DRGS B00139-ESC001 to ESC602

NOTE:-
LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE
CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE
COMMENCEMENT OF CONSTRUCTION. IT IS THE
CONTRACTOR'S RESPONSIBILITY TO PERFORM A DIAL
BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF
WORKS




NOTE: LOCATION & LEVELS OF ALL EXISTING SERVICES AND PROPOSED STORMWATER OUTLETS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF WORKS. ANY POTENTIAL CONFLICT OF EXISTING SERVICES OR STORMWATER OUTLETS SHALL BE REPORTED TO THE SUPERINTENDENT.

NOTE:-
THE CUT AND FILL DEPTHS SHOWN ON THIS PLAN REFLECT THE CUT/FILL REQUIRED TO ACHIEVE THE DESIGN SURFACE LEVELS, RELATIVE TO THE SURFACE LEVELS IN PLACE PRIOR TO THIS PACKAGE OF CONSTRUCTION WORKS. THESE CUT/FILL DEPTHS DO NOT NECESSARILY RELATE TO THE NATURAL SURFACE LEVELS, AS OTHER WORKS MAY HAVE BEEN DONE ON THIS LAND PRIOR TO THIS PACKAGE OF CONSTRUCTION WORKS.

[illegible]

Empower 
**ENGINEERS &
PROJECT MANAGERS** **ABN 23 010 743 692**

<i>Client</i>	BMD PROPERTIES PTY LTD
<i>Project</i>	CANNON HILL COMMUNITY LINKS STAGE 2
<i>Title</i>	EARTHWORKS MANAGEMENT LAYOUT PLAN SHEET 1 OF 2

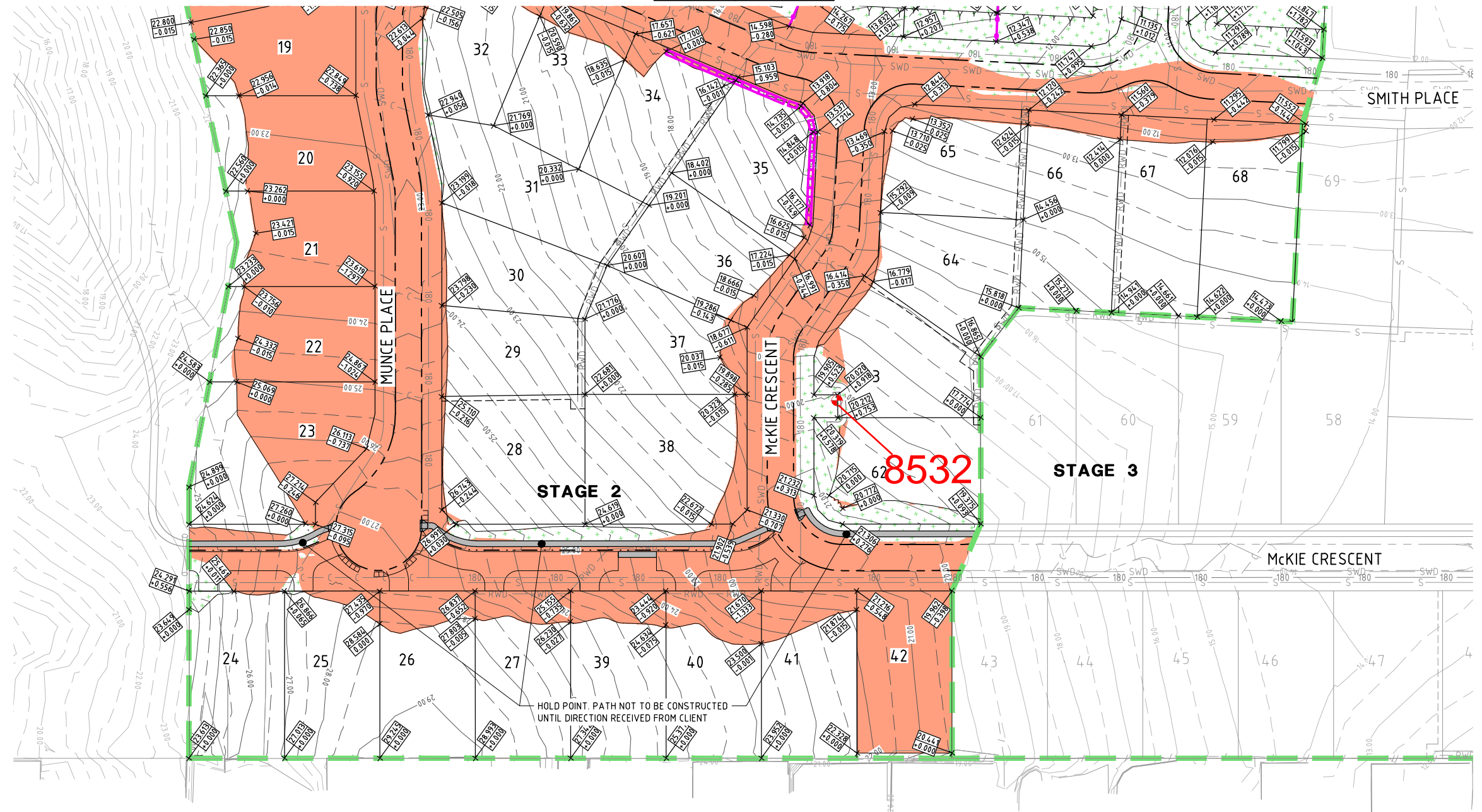
Datum AHD PSM 119825 RL 2.600 (MGA) COORD	
FOR CONSTRUCTION	
Project No. Drawing No.	Rev
B00139-CE202	1

TRANSFORMER PAD BACKFILL

LEGEND

- STAGE BOUNDARY
- FINISHED MAJOR CONTOUR (1.0m)
- FINISHED MINOR CONTOUR (0.5m)
- TYPE 'D' LAYBACK KERB AND CHANNEL
- TYPE 'E' UPRIGHT KERB AND CHANNEL
- CONCRETE SLEEPER RETAINING WALL
- 'A' GRADE SANDSTONE RETAINING WALL
- PROPOSED SEWERAGE RETICULATION
- PROPOSED WATER RETICULATION
- PROPOSED WATER CONDUIT CROSSINGS
- CUT
- FILL
- + = AMOUNT OF FILL
- = AMOUNT OF CUT
FSL = FINISHED SURFACE LEVEL

JOINS DWG B00139-CE202



NOTE:-
THE CUT AND FILL DEPTHS SHOWN ON THIS PLAN REFLECT THE CUT/FILL REQUIRED TO ACHIEVE THE DESIGN SURFACE LEVELS, RELATIVE TO THE SURFACE LEVELS IN PLACE PRIOR TO THIS PACKAGE OF CONSTRUCTION WORKS. THESE CUT/FILL DEPTHS DO NOT NECESSARILY RELATE TO THE NATURAL SURFACE LEVELS, AS OTHER WORKS MAY HAVE BEEN DONE ON THIS LAND PRIOR TO THIS PACKAGE OF CONSTRUCTION WORKS.

NOTE:-
FOR EROSION AND SEDIMENT CONTROL DETAILS REFER DRGs B00139-ESC001 to ESC602

NOTE:-
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NOTE: LOCATION & LEVELS OF ALL EXISTING SERVICES AND PROPOSED STORMWATER OUTLETS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF WORKS. ANY POTENTIAL CONFLICT OF EXISTING SERVICES OR STORMWATER OUTLETS SHALL BE REPORTED TO THE SUPERINTENDENT.

0 10 20 30 40 50m
SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

Empower
ENGINEERS &
PROJECT MANAGERS
ABN 23 010 743 692

Client
BMD PROPERTIES PTY LTD
Project
CANNON HILL COMMUNITY LINKS STAGE 2
Title
**EARTHWORKS MANAGEMENT
LAYOUT PLAN
SHEET 2 OF 2**

Datum
AHN
PSM 119825
RL 2.600
(MGA) COORD
FOR CONSTRUCTION
Project No.
B00139-CE203
Drawing No.
1



Brisbane Soil Testing

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FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.

ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38797
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	14/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
1 5812	10.00	150	LOT 79 4m Front bdy, 3m Right bdy R.L.7.07	5812	6.0	6.0	13.5	Adj. 13.5	-	100.0	1.86	Adj. 1.90	98.0
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 3.11.16

Checked By: R MCGRANN

RM



Accreditation No.2415

Accredited for compliance with ISO/IEC 17025 – Testing.

Greg McGrann

Greg McGrann/Manager
Approved Signatory



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Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	15/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
2 5813	9.00	150	LOT 79 6m Front bdy, 3m Left bdy R.L.7.64	5813	6.0	6.0	10.5	Adj. 10.5	-	100.0	1.98	Adj. 1.98	100.0
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 3.11.16



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Accreditation No.2415

Checked By: R MCGRANN

RM

Greg McGrann

Greg McGrann/Manager
Approved Signatory



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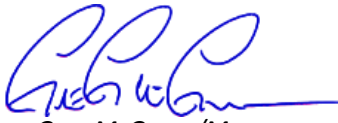
Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38825
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	17/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
3 5828	8.30	150	LOT 77 5m Front bdy, 2m Right bdy R.L.10.32	5828	8.0	9.0	14.0	Adj. 15.0	1.0 DRY	94.0	1.77	Adj. 1.83	96.5
Material Description: BROWN SILTY GRAVELLY CLAY.													
4 5829	9.00	150	LOT 78 6m Rear bdy, 3m Left bdy R.L.8.54	5829	6.0	7.0	12.5	Adj. 14.5	2.0 DRY	86.5	1.84	Adj. 1.86	99.0
Material Description: REDDISH-BROWN SILTY GRAVELLY CLAY.													
5 5830	9.30	150	LOT 79 9m Rear bdy, 4m Left bdy R.L.7.17	5830	6.0	7.0	12.5	Adj. 14.5	2.0 DRY	86.5	1.84	Adj. 1.86	99.0
Material Description: BROWN SILTY CLAY & ROCK FRAGMENTS.													
6 5831	10.00	150	LOT 79 1m Front bdy, 2m Left bdy R.L.5.72	5831	7.0	7.0	15.0	Adj. 14.0	1.0 WET	108.0	1.88	Adj. 1.89	99.5
Material Description: BROWN SILTY CLAY & ROCK FRAGMENTS.													
7 5833	11.00	150	LOT 77 9m Front bdy, 4m Right bdy R.L.10.70	5833	5.0	6.0	18.5	Adj. 17.0	1.5 WET	110.0	1.74	Adj. 1.77	98.5
Material Description: BROWN SILTY CLAY & ROCK FRAGMENTS.													
								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	Determined on material finer than 19mm	
Prepared By: G MCGRANN Date: 8.11.16	 Accredited for compliance with ISO/IEC 17025 – Testing. Accreditation No.2415	 Greg McGrann/Manager Approved Signatory
Checked By: R MCGRANN <i>RM</i>		



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FIELD DENSITY CERTIFICATE

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38827
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	18/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
8 5849	8.30	150	LOT 76 2m Rear bdy, 2m Right bdy R.L.7.73	5849	11.0	13.0	11.5	Adj. 9.5	2.0 DRY	121.5	1.94	Adj. 1.98	98.0
Material Description:DARK BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
9 5850	9.00	150	LOT 79 3m Front bdy, 2m Left bdy R.L.6.42	5850	6.0	7.0	19.0	Adj. 14.5	4.5 WET	132.0	1.77	Adj. 1.85	95.5
Material Description:REDDISH-BROWN SILTY CLAY & ROCK FRAGMENTS.													
10 5852	10.00	150	LOT 76 1m Rear bdy, 5m Left bdy R.L.7.93	5852	-	-	8.5	Adj. 11.5	3.0 DRY	74.0	1.95	Adj. 1.90	102.5
Material Description:DARK BROWN SILTY SANDY CLAY.													
11 5853	11.00	150	LOT 76 4m Rear bdy, 6m Right bdy R.L.8.34	5853	5.0	5.0	15.5	Adj. 13.5	2.0 WET	117.5	1.86	Adj. 1.87	99.5
Material Description:LIGHT ORANGE-BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 8.11.16

Checked By: R MCGRANN

RM



Accreditation No.2415

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Greg McGrann

Greg McGrann/Manager
Approved Signatory



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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	EMBANKMENT FILL	Report No.	38830
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	19/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
12 5873	8.30	150	MUNCE PLACE o/s 1m L, CH50 1.4m below P.L.	5873	7.0	8.0	12.5	Adj. 12.5	-	100.0	1.88	Adj. 1.93	97.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
14 5876	10.00	150	MUNCE PLACE o/s 2.5m L, CH23 1.15m below P.L.	5876	3.0	4.0	12.5	Adj. 13.5	1.0 DRY	92.5	1.80	Adj. 1.83	98.5
Material Description: LIGHT BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
								Adj.				Adj.	
Material Description:													
								Adj.				Adj.	
Material Description:													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 8.11.16

Checked By: R MCGRANN

RM



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Greg McGrann

Greg McGrann/Manager
Approved Signatory



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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38831
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	19/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
13 5874	9.00	150	LOT 76 7m Rear bdy, 3m Right bdy R.L.8.63	5874	10.0	11.0	10.00	Adj. 10.0	-	100.0	2.05	Adj. 2.02	101.5
Material Description: BROWN SANDY GRAVELLY CLAY.													
15 5877	10.30	150	LOT 77 3m Rear bdy, 1m Right bdy R.L.10.44	5877	6.0	7.0	10.0	Adj. 10.5	0.5 DRY	94.0	1.98	Adj. 2.00	99.0
Material Description: LIGHT YELLOW-BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
16 5878	11.00	150	LOT 76 6m Rear bdy, 5m Left bdy R.L.8.35	5878	6.0	6.0	11.0	Adj. 11.0	-	100.0	1.95	Adj. 1.98	98.5
Material Description: BROWN SANDY CLAY & ROCK FRAGMENTS.													
								Adj.				Adj.	
Material Description:													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 8.11.16

Checked By: R MCGRANN

RM



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Accreditation No.2415

Greg McGrann

Greg McGrann/Manager

Approved Signatory



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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38889
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	20/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
17 5926	8.00	150	LOT 14 3m Rear bdy, 3m Right bdy R.L.22.41	5926	7.0	8.0	13.5	Adj. 13.0	0.5 WET	105.0	1.87	Adj. 1.94	96.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
18 5927	8.30	150	LOT 1 2m Rear bdy, 4m Left bdy R.L.22.49	5926	7.0	8.0	15.5	Adj. 14.5	1.0 WET	106.0	1.81	Adj. 1.88	96.5
Material Description: REDDISH-BROWN SILTY CLAY & ROCK FRAGMENTS.													
19 5928	9.00	150	LOT 14 4m Rear bdy, 7m Right bdy R.L.22.91	5928	13.0	14.0	14.0	Adj. 15.0	1.0 DRY	94.5	1.81	Adj. 1.87	97.0
Material Description: REDDISH-BROWN SILTY CLAY & ROCK FRAGMENTS.													
20 5929	9.30	150	LOT 1 4m Rear bdy, 2m Right bdy R.L.22.75	5929	7.0	8.0	15.5	Adj. 14.5	1.0 WET	104.5	1.87	Adj. 1.86	100.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
21 5932	11.00	150	LOT 17 6m Rear bdy, 1m Right bdy R.L.22.12	5932	6.0	7.0	14.5	Adj. 14.0	0.5 WET	102.5	2.00	Adj. 1.88	106.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
22 5933	11.30	150	LOT 17 4m Rear bdy, 2m Right bdy R.L.22.53	5933	3.0	3.0	16.5	Adj. 16.5	-	100.0	1.73	Adj. 1.79	96.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													

Remarks:

Required Dry Density Ratio 95% 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:14.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No.2415

Greg McGrann/Manager

Approved Signatory

Date:14.11.16

Greg McGrann



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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38923
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	21/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
23 5947	8.00	150	LOT 17 5m Rear bdy, 2m Left bdy R.L.20.56	5947	4.0	5.0	13.0	Adj. 13.0	-	100.0	1.92	Adj. 1.95	98.5
Material Description: LIGHT BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
24 5948	8.30	150	LOT 17 8m Rear bdy, 3m Left bdy R.L.21.31	5948	6.0	6.0	13.5	Adj. 12.0	1.5 WET	110.0	1.87	Adj. 1.94	96.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
25 5949	9.00	150	LOT 17 2m Rear bdy, 5m Left bdy R.L.22.00	5949	8.0	9.0	14.0	Adj. 13.0	1.0 WET	108.5	1.91	Adj. 1.95	98.0
Material Description: LIGHT YELLOW-BROWN SILTY SANDY & ROCK FRAGMENTS.													
26 5950	9.30	150	LOT 16 2m Rear bdy, 3m Left bdy R.L.21.50	5950	4.0	4.0	13.0	Adj. 12.5	0.5 WET	105.0	1.87	Adj. 1.96	95.5
Material Description: LIGHT YELLOW-BROWN SILTY SANDY & ROCK FRAGMENTS.													
27 5951	10.00	150	LOT 77 8m Front bdy, 4m Right bdy R.L.11.05	5951	11.0	12.0	11.0	Adj. 9.5	1.5 WET	119.5	2.06	Adj. 2.02	102.0
Material Description: LIGHT BROWN SILTY SANDY GRAVELLY CLAY.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:21.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No.2415

Greg McGrann/Manager

Approved Signatory

Date:21.11.16

Greg McGrann



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FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.

ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	EMBANKMENT FILL	Report No.	38924
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	21/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
28 5952	10.30	150	MUNCE PLACE o/s 2m R, CH67 0.9m below P.L.	5952	4.0	4.0	14.0	Adj. 12.0	2.0 WET	116.0	1.86	Adj. 1.95	95.5
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 21.11.16

Checked By: R MCGRANN

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Date: 21.11.16

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FIELD DENSITY CERTIFICATE

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38926
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	24/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
29 5982	8.15	150	LOT 10 8m Front bdy, 2m Right bdy R.L.17.63	5982	-	-	13.0	Adj. 16.0	3.0 DRY	81.5	1.71	Adj. 1.78	96.0
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
30 5983	8.45	150	LOT 9 9m Front bdy, 2m Right bdy R.L.15.28	5983	8.0	9.0	11.5	Adj. 12.5	1.0 DRY	89.0	1.85	Adj. 1.91	97.0
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
31 5984	9.15	150	LOT 8 10m Front bdy, 3m Right bdy R.L.13.29	5984	-	-	12.5	Adj. 14.0	1.5 DRY	89.5	1.83	Adj. 1.85	100.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
32 5985	9.45	150	LOT 7 7m Rear bdy, 2m Right bdy R.L.12.24	5985	3.0	4.0	12.5	Adj. 12.0	0.5 WET	103.0	1.91	Adj. 1.97	97.0
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
33 5986	10.15	150	LOT 77 7m Rear bdy, 5m Left bdy R.L.11.41	5986	9.0	11.0	17.0	Adj. 13.5	3.5 WET	128.5	1.83	Adj. 1.91	96.0
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:21.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

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Greg McGrann/Manager

Approved Signatory

Date:21.11.16

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38928
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	25/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
34 6008	10.15	150	LOT 76 4m Rear bdy, 6m Left bdy R.L.9.29	6008	2.0	3.0	15.5	Adj. 14.5	1.0 WET	107.0	1.81	Adj. 1.84	98.5
Material Description: BROWN SILTY CLAY & ROCK FRAGMENTS.													
35 6009	10.45	150	LOT 78 7m Rear bdy, 4m Left bdy R.L.9.30	6009	9.0	10.0	8.5	Adj. 10.0	1.5 DRY	85.0	2.00	Adj. 1.99	100.5
Material Description: LIGHT BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
								Adj.				Adj.	
Material Description:													
								Adj.				Adj.	
Material Description:													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 21.11.16



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Checked By: R MCGRANN

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Greg McGrann/Manager

Approved Signatory

Date: 21.11.16

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38929
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	26/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
					Wet	Dry							
36 6048	8.30	150	LOT 76 11m Front bdy, 4m Right bdy R.L.9.92	6048	4.0	5.0	15.5	Adj. 16.0	0.5 DRY	95.5	1.68	Adj. 1.77	95.0
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 21.11.16

Checked By: R MCGRANN

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Greg McGrann/Manager

Approved Signatory

Date: 21.11.16

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38932
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	27/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
37 6078	9.30	150	LOT 79 4m Rear bdy, 5m Right bdy R.L.8.37	6078	-	-	16.0	Adj. 19.5	3.5 DRY	82.0	1.67	Adj. 1.70	98.0
Material Description: REDDISH-BROWN SILTY CLAY & ROCK FRAGMENTS.													
38 6079	10.00	150	LOT 79 2m Right bdy, 3m Left bdy R.L.9.04	6079	-	-	16.5	Adj. 19.0	2.5 DRY	87.0	1.74	Adj. 1.70	102.5
Material Description: REDDISH-BROWN SILTY CLAY & ROCK FRAGMENTS.													
39 6080	10.30	150	LOT 76 9m Rear bdy, 4m Right bdy R.L.10.30	6080	-	-	12.0	Adj. 12.5	0.5 DRY	96.0	1.81	Adj. 1.91	95.0
Material Description: LIGHT BROWN SILTY SANDY CLAY.													
40 6081	11.00	150	LOT 76 7m Front bdy, 6m Left bdy R.L.10.84	6081	-	-	10.0	Adj. 11.0	1.0 DRY	91.0	1.93	Adj. 1.95	99.0
Material Description: LIGHT YELLOW-BROWN SANDY CLAY.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:21.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No.2415

Greg McGrann/Manager

Approved Signatory

Date:21.11.16

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FIELD DENSITY CERTIFICATE

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39659
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	28/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
41 6106	9.00	150	LOT 78 9m Front bdy, 5m Left bdy R.L.9.94	6106	3.0	3.0	13.0	Adj. 14.0	1.0 DRY	92.5	1.92	Adj. 1.84	104.5
Material Description: LIGHT GREY-BROWN SILTY SANDY CLAY & ROCK FRAGMENTS													
43 6108	10.00	150	LOT 79 7m Rear bdy, 4m Left bdy R.L.9.76	6108	3.0	4.0	13.5	Adj. 15.0	1.5 DRY	89.0	1.72	Adj. 1.81	95.0
Material Description: LIGHT RED-BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
44 6109	10.30	150	LOT 78 6m Rear bdy, 3m Right bdy R.L.10.48	6109	6.0	6.0	13.5	Adj. 13.0	0.5 WET	103.0	1.89	Adj. 1.90	99.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
45 6110	11.0	150	LOT 7 8m Rear bdy, 4m Right bdy R.L.12.72	6110	6.0	7.0	10.0	Adj. 13.0	3.0 DRY	77.0	1.86	Adj. 1.92	97.0
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
								Adj.				Adj.	
Material Description:													
								Adj.				Adj.	
Material Description:													

Remarks: Reissue of report no.38934

Required Dry Density Ratio 95% 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:23.2.17

Checked By: R MCGRANN

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Greg McGrann/Manager

Approved Signatory

Date:23.2.17

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FIELD DENSITY CERTIFICATE

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	EMBANKMENT FILL	Report No.	38935
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	28/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
42 6107	9.30	150	MUNCE PLACE o/s 1.5m Right CH42 0.7m below P.L.	6107	7.0	8.0	12.5	Adj. 13.5	1.0 DRY	94.0	1.83	Adj. 1.93	95.0
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 21.11.16

Checked By: R MCGRANN

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Date: 21.11.16

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FIELD DENSITY CERTIFICATE

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38937
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	29/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
46 6128	10.00	150	LOT 77 11m Front bdy, 4m Left bdy R.L.11.89	6128	3.0	4.0	9.0	Adj. 9.0	-	100.0	2.08	Adj. 2.06	101.0
Material Description: LIGHT GREY-BROWN SANDY GRAVELLY CLAY.													
47 6129	10.30	150	LOT 78 7m Rear bdy, 5m Left bdy R.L.10.65	6129	7.0	7.0	9.0	Adj. 8.5	0.5 WET	107.5	2.02	Adj. 2.08	97.0
Material Description: BROWN SANDY GRAVELLY CLAY.													
								Adj.				Adj.	
Material Description:													
								Adj.				Adj.	
Material Description:													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 21.11.16

Checked By: R MCGRANN

RMc



Accreditation No. 2415

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Greg McGrann/Manager

Approved Signatory

Date: 21.11.16

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FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	38983
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	31/10/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
48 6137	10.30	150	LOT 7 12m Front bdy, 3m Right bdy R.L.13.21	6137	-	-	10.0	Adj. 10.0	-	100.0	1.94	Adj. 1.98	98.0
Material Description: LIGHT BROWN SILTY SANDY CLAY.													
49 6138	11.00	150	LOT 6 4m Rear bdy, 2m Left bdy R.L.11.88	6138	-	-	9.5	Adj. 11.5	2.0 DRY	82.5	1.99	Adj. 1.97	101.0
Material Description: LIGHT REDDISH-BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
50 6139	11.30	150	LOT 6 9m Rear bdy, 4m Left bdy R.L.12.35	6139	-	-	11.0	Adj. 12.5	1.5 DRY	88.0	1.84	Adj. 1.87	98.5
Material Description: REDDISH-BROWN SILTY SANDY CLAY.													
51 6140	12.00	150	LOT 6 6m Rear bdy, 6m Left bdy R.L.12.95	6140	-	-	14.5	Adj. 14.0	0.5 WET	103.5	1.72	Adj. 1.77	97.0
Material Description: BROWN SILTY CLAY.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:23.11.16

Checked By: R MCGRANN

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Greg McGrann/Manager

Approved Signatory

Date:23.11.16

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FIELD DENSITY CERTIFICATE

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Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39033
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	2/11/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
52 6198	8.00	150	LOT 79 10m Front bdy, 3m Left bdy R.L.10.28	6198	7.0	7.0	9.0	Adj. 11.0	2.0 DRY	82.5	2.01	Adj. 1.96	102.5
Material Description: LIGHT BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
53 6199	8.30	150	LOT 78 6m Rear bdy, 6m Left bdy R.L.11.24	6199	7.0	7.0	9.5	Adj. 9.5	-	100.0	1.97	Adj. 2.02	97.5
Material Description: LIGHT BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
55 6201	9.30	150	LOT 76 10m Rear bdy, 6m Left bdy R.L.11.19	6201	4.0	4.0	9.0	Adj. 9.0	-	100.0	2.09	Adj. 2.07	101.0
Material Description: BROWN SANDY CLAY & ROCK FRAGMENTS.													
56 6202	10.00	150	LOT 7 10m Rear bdy, 4m Left bdy R.L.13.60	6202	5.0	6.0	11.0	Adj. 10.5	0.5 WET	105.0	1.94	Adj. 1.98	98.0
Material Description: BROWN SANDY CLAY & ROCK FRAGMENTS.													
57 6203	10.30	150	LOT 79 8m Front bdy, 5m Left bdy R.L.10.71	6203	8.0	9.0	8.0	Adj. 8.0	-	100.0	2.09	Adj. 2.09	100.0
Material Description: LIGHT BROWN SANDY CLAY & ROCK FRAGMENTS.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:29.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No.2415

Greg McGrann/Manager

Approved Signatory

Date:29.11.16

Greg McGrann



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FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.

ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	EMBANKMENT FILL	Report No.	39034
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	2/11/2016	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
54 6200	9.00	150	MUNCE PLACE 0.5m L, CH53 0.75m below P.L.	6200	5.0	6.0	8.5	Adj. 9.0	0.5 DRY	94.0	2.01	Adj. 2.06	97.5
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 29.11.16

Checked By: R MCGRANN

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Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No. 2415

Greg McGrann/Manager

Approved Signatory

Date: 29.11.16

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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39038
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	3/11/2016	Tested by	AC JM

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
58 6204	8.00	150	LOT 17 8m Rear bdy, 4m Left bdy R.L.22.31	6204	-	-	19.0	Adj. 21.5	2.5 DRY	88.5	1.70	Adj. 1.68	101.0
Material Description: REDDISH-BROWN SILTY CLAY.													
59 6205	8.00	150	LOT 16 4m Rear bdy, 4m Left bdy R.L.22.11	6205	-	-	7.5	Adj. 10.0	2.5 DRY	75.0	1.99	Adj. 2.03	98.0
Material Description: BROWN SANDY CLAY & ROCK FRAGMENTS.													
60 6206	8.30	150	LOT 16 3m Rear bdy, 2m Right bdy R.L.22.70	6206	-	-	18.5	Adj. 21.0	2.5 DRY	88.0	1.71	Adj. 1.68	102.0
Material Description: RED SILTY CLAY & ROCK FRAGMENTS.													
61 6207	9.00	150	LOT 15 2m Rear bdy, 4m Right bdy R.L.22.30	6207	-	-	15.0	Adj. 18.0	3.0 DRY	83.5	1.73	Adj. 1.72	100.5
Material Description: REDDISH-BROWN SILTY CLAY & ROCK FRAGMENTS.													
62 6208	9.00	150	LOT 15 3m Rear bdy, 6m Right bdy R.L.22.82	6208	-	-	16.0	Adj. 17.0	1.0 DRY	94.0	1.80	Adj. 1.73	104.0
Material Description: BROWN SILTY CLAY.													
63 6209	9.30	150	LOT 11 7m Front bdy, 1m Right bdy R.L.19.65	6209	-	-	21.0	Adj. 23.5	2.5 DRY	89.5	1.51	Adj. 1.56	97.0
Material Description: BROWN SILTY CLAY.													

Remarks:

Required Dry Density Ratio 95% 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:29.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No.2415

Greg McGrann/Manager

Approved Signatory

Date:29.11.16

Greg McGrann



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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39039
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	3/11/2016	Tested by	AC JM

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
64 6210	9.30	150	LOT 5 3m Rear bdy, 1m Left bdy R.L.15.77	6210	-	-	18.0	Adj. 21.0	3.0 DRY	85.5	1.58	Adj. 1.65	96.0
Material Description: BROWN SILTY CLAY.													
65 6211	10.00	150	LOT 9 9m Front bdy, 2m Right bdy R.L.15.69	6211	-	-	13.5	Adj. 15.5	2.0 DRY	87.0	1.70	Adj. 1.79	95.0
Material Description: DARK BROWN SILTY CLAY.													
66 6212	10.00	150	LOT 6 10m Front bdy, 5m Left bdy R.L.13.44	6212	-	-	10.0	Adj. 9.5	0.5 WET	105.0	1.92	Adj. 1.99	96.5
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
								Adj.				Adj.	
Material Description:													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 30.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No. 2415

Greg McGrann/Manager

Approved Signatory

Date: 30.11.16

Greg McGrann



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FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.

ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39040
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	4/11/2016	Tested by	AC JM

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
67 6251	8.00	150	LOT 8 7m Rear bdy, 3m Right bdy R.L.13.82	6251	7.0	8.0	13.5	Adj. 11.0	2.5 WET	122.5	1.97	Adj. 1.96	101.0
Material Description: BROWN SILTY SANDY & ROCK FRAGMENTS.													
68 6252	8.00	150	LOT 76 9m Front bdy, 4m Right bdy R.L.11.60	6252	8.0	9.0	12.0	Adj. 10.0	2.0 WET	119.0	2.04	Adj. 2.01	102.0
Material Description: LIGHT BROWN SILTY SANDY CLAY.													
69 6253	8.30	150	LOT 17 9m Rear bdy, 5m Left bdy R.L.22.67	6253	6.0	7.0	14.5	Adj. 11.5	3.0 WET	122.5	1.94	Adj. 1.92	101.0
Material Description: DARK BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
70 6254	8.30	150	LOT 8 8m Rear bdy, 5m Right bdy R.L.14.21	6254	3.0	3.0	12.5	Adj. 11.5	1.0 WET	105.5	1.95	Adj. 1.91	102.0
Material Description: BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
71 6255	9.00	150	LOT 79 11m Rear bdy, 5m Left bdy R.L.11.13	6255	-	-	13.0	Adj. 16.0	3.0 DRY	81.0	1.68	Adj. 1.75	96.0
Material Description: BROWN SILTY CLAY.													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date:30.11.16

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No.2415

Greg McGrann/Manager

Approved Signatory

Date:30.11.16

Greg McGrann



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FIELD DENSITY CERTIFICATE

Connemar Pty. Ltd.

ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	PAD MOUNT TRANSFORMER BACKFILL	Report No.	39934
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	14/03/2017	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
72 8532	8.00	150	LOC ON ATT PLAN 0.15m below F.L.	8532	-	-	11.0	Adj. 13.0	2.0 DRY	84.5	1.81	Adj. 1.88	96.0
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 23.3.17

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No. 2415

Greg McGrann/Manager

Approved Signatory

Date: 23.3.17

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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39967
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	14/03/2017	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm		Field Moisture Context %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
72 8532	8.00	150	LOT 63 5m Front bdy, 4m Right bdy 0.15m below F.L.	8532	-	-	11.0	Adj. 13.0	2.0 DRY	84.5	1.81	Adj. 1.88	96.0
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	
								Adj.				Adj.	

Remarks:

Required Dry Density Ratio 95% 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: 28.3.17

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No. 2415

Greg McGrann/Manager

Approved Signatory

Date: 28.3.17

Greg McGrann



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FIELD DENSITY CERTIFICATE

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ABN 50 065 093 647

Geotechnical Testing Services

Customer	BMD URBAN PTY LTD	Feature	ALLOTMENT FILL	Report No.	39935
Address	PO BOX 197, WYNNUM CENTRAL QLD 4178	Location	SEE BELOW	Job No.	1643
Project	CANNON HILL COMMUNITY LINKS – STAGE 2	Date Tested	14/3/2017	Tested by	AC

Field Test N ^o Sample N ^o	Time of Test	Depth of Test mm	Test Location	Lab Compaction N ^o	% Oversize 19mm/37.5mm Wet Dry		Field Moisture Content %	Optimum Moisture Content %	Moisture Variation %	Moisture Ratio %	Field Dry Density t/m ³	Max. Dry Density t/m ³	Dry Density Ratio %
73 8533	8.00	150	LOT 62 1m Front bdy, 5m Left bdy R.L.21.20	8533	-	-	11.0	Adj. 12.5	1.5 DRY	88.0	1.81	Adj. 1.87	97.0
Material Description: LIGHT BROWN SILTY SANDY CLAY & ROCK FRAGMENTS.													
74 8534	8.30	150	LOT 24 1m Front bdy, 2m Right bdy R.L.24.15	8534	-	-	8.0	Adj. 10.0	2.0 DRY	80.0	1.90	Adj. 10.0	95.0
Material Description: GREY-BROWN SANDY CLAY & ROCK FRAGMENTS.													
								Adj.				Adj.	
Material Description:													
								Adj.				Adj.	
Material Description:													
								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

Determined on material finer than 19mm

Prepared By: G MCGRANN

Date: 23.3.17

Checked By: R MCGRANN

RMc



Accredited for compliance with ISO/IEC 17025 – Testing.

Accreditation No. 2415

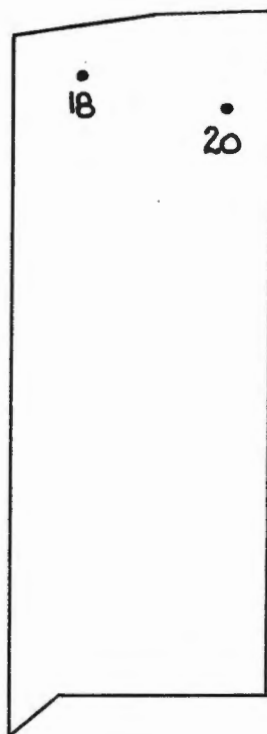
Greg McGrann/Manager

Approved Signatory

Date: 23.3.17

Greg McGrann

**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 1**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
18	20.10.16	o/s 2m Rear bdy, o/s 4m Left bdy. R.L.22.49.	96.5
20	20.10.16	o/s 4m Rear bdy, o/s 2m Right bdy. R.L.22.75.	100.5

In our opinion fill on Lot 1 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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.

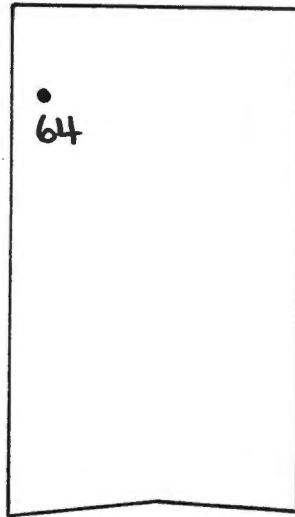
A blue ink signature of Greg McGrann.

GREG McGRANN



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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 5**



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Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
64	3.11.16	o/s 3m Rear bdy, o/s 1m Left bdy. R.L.15.77.	96.0

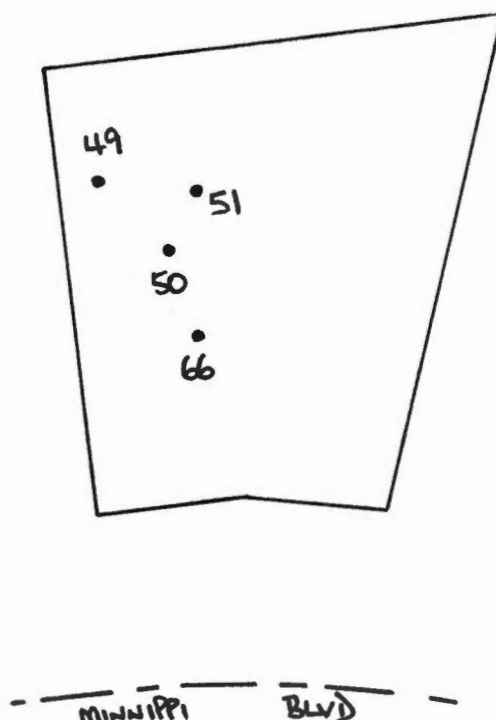
In our opinion fill on Lot 5 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level 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



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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 6**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
49	31.10.16	o/s 4m Rear bdy, o/s 2m Left bdy. R.L.11.88.	101.0
50	31.10.16	o/s 9m Rear bdy, o/s 4m Left bdy. R.L.12.35.	98.5
51	31.10.16	o/s 6m Rear bdy, o/s 6m Left bdy. R.L.12.95.	97.0
66	3.11.16	o/s 10m Front bdy, o/s 5m Left bdy. R.L.13.44.	96.5

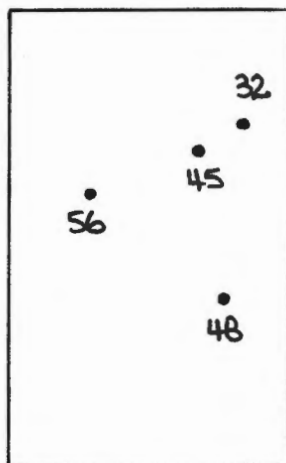
In our opinion fill on Lot 6 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level 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



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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 7**



MUNCE PLACE

Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
32	24.10.16	o/s 7m Rear bdy, o/s 2m Right bdy. R.L.12.24.	97.0
45	28.10.16	o/s 8m Rear bdy, o/s 4m Right bdy. R.L.12.72.	97.0
48	31.10.16	o/s 12m Front bdy, o/s 3m Right bdy. R.L.13.21.	98.0
56	2.11.16	o/s 10m Rear bdy, o/s 4m Left bdy. R.L.13.60.	98.0

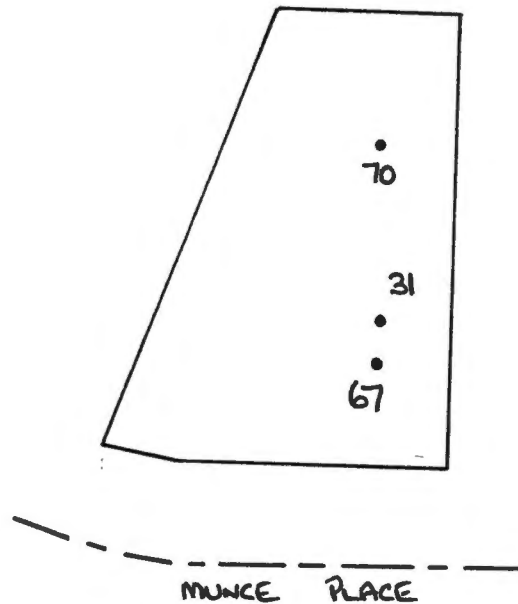
In our opinion fill on Lot 7 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level 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



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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 8**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
31	24.10.16	o/s 10m Front bdy, o/s 3m Right bdy. R.L.13.29.	100.5
67	4.11.16	o/s 7m Front bdy, o/s 3m Right bdy. R.L.13.82.	101.0
70	4.11.16	o/s 8m Rear bdy, o/s 5m Right bdy. R.L.14.21.	102.0

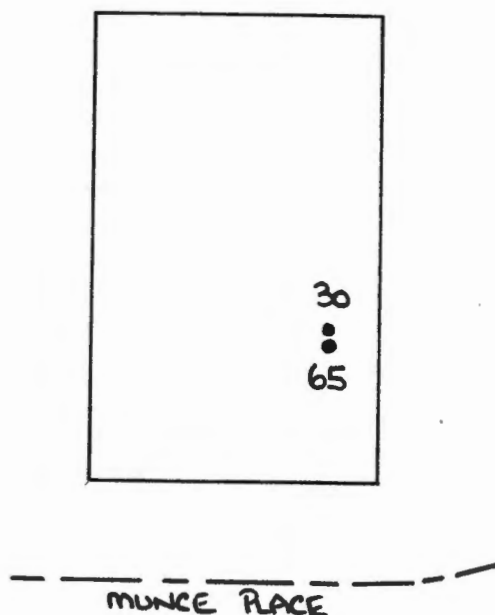
In our opinion fill on Lot 8 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level 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



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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 9**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
30	24.10.16	o/s 9m Front bdy, o/s 2m Right bdy. R.L.15.28.	97.0
65	3.11.16	o/s 9m Front bdy, o/s 2m Right bdy. R.L. 15.69.	95.0

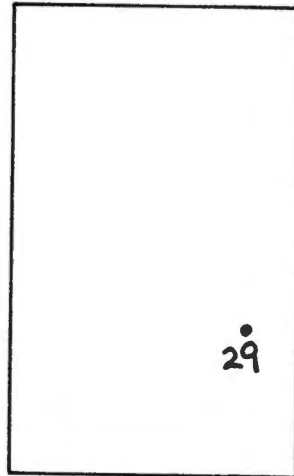
In our opinion fill on Lot 9 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level 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



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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 10**



MUNCE RACE

Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
29	24.10.16	o/s 8m Front bdy, o/s 2m Right bdy. R.L.17.63.	96.0

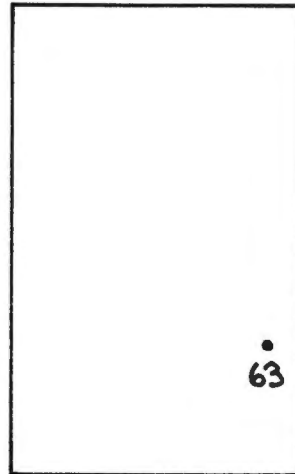
In our opinion fill on Lot 10 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 11**



----- MUNCE PLACE -----

Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
63	3.11.16	o/s 7m Front bdy, o/s 1m Right bdy. R.L.19.65.	97.0

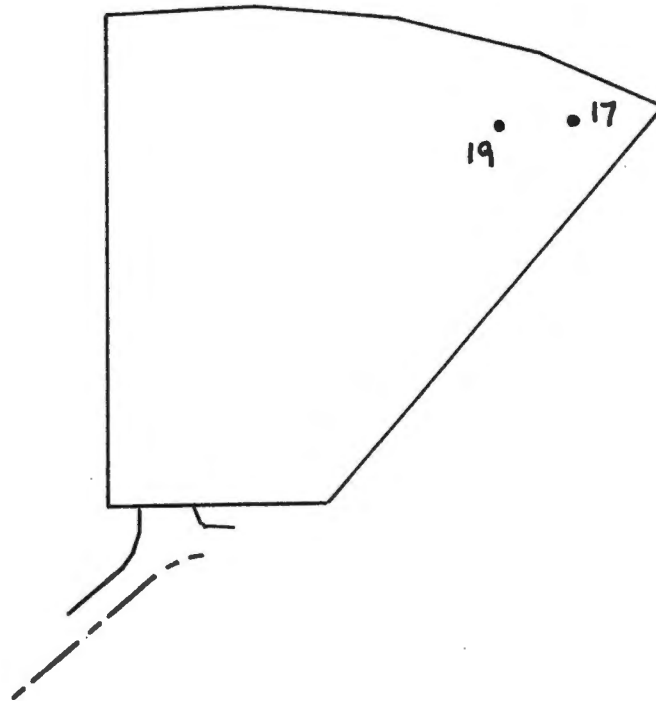
In our opinion fill on Lot 11 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 14**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
17	20.10.16	o/s 3m Rear bdy, o/s 3m Right bdy. R.L.22.41.	96.5
19	20.10.16	o/s 4m Rear bdy, o/s 7m Right bdy. R.L.22.91.	97.0

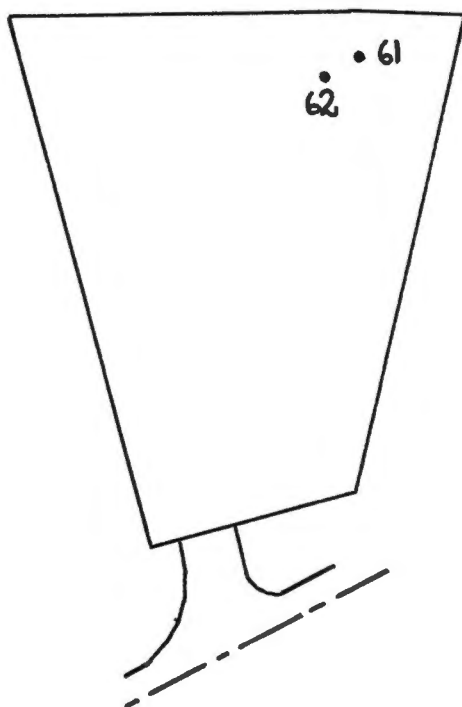
In our opinion fill on Lot 14 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.


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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 15**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
61	3.11.16	o/s 2m Rear bdy, o/s 4m Right bdy. R.L.22.30.	100.5
62	3.11.16	o/s 3m Rear bdy, o/s 6m Right bdy. R.L.22.82.	104.0

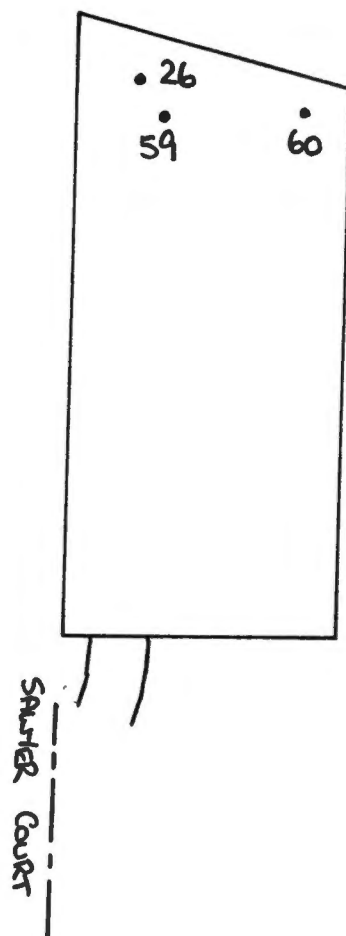
In our opinion fill on Lot 15 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 16**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
26	21.10.16	o/s 2m Rear bdy, o/s 3m Left bdy. R.L.21.50.	95.5
59	3.11.16	o/s 4m Rear bdy, o/s 4m Left bdy. R.L.22.11.	98.0
60	3.11.16	o/s 3m Rear bdy, o/s 2m Right bdy. R.L.22.70.	102.0

In our opinion fill on Lot 16 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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.


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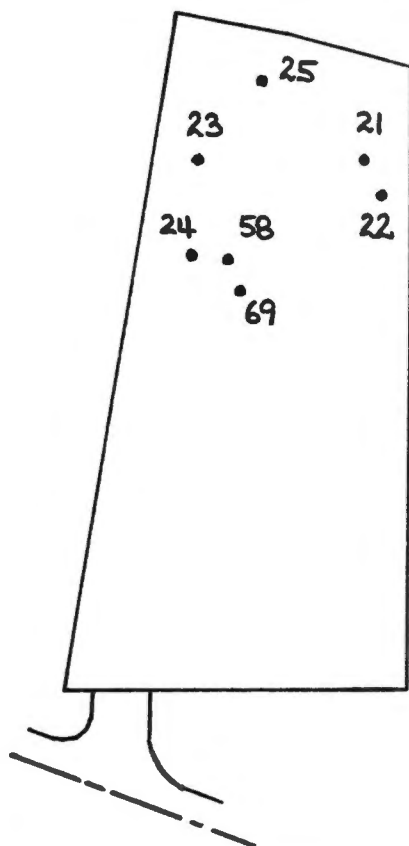


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EARTHWORKS SUMMARY REPORT

CANNON HILL COMMUNITY LINKS – STAGE 2

LOT 17



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
21	20.10.16	o/s 6m Rear bdy, o/s 1m Right bdy. R.L.22.12.	106.5
22	20.10.16	o/s 4m Rear bdy, o/s 2m Right bdy. R.L.22.53.	96.5
23	21.10.16	o/s 5m Rear bdy, o/s 2m Left bdy. R.L.20.56.	98.5
24	21.10.16	o/s 8m Rear bdy, o/s 3m Left bdy. R.L.21.31.	96.5
25	21.10.16	o/s 2m Rear bdy, o/s 5m Left bdy. R.L.22.00.	98.0
58	3.11.16	o/s 8m Rear bdy, o/s 4m Left bdy. R.L.22.31.	101.0
69	4.11.16	o/s 9m Rear bdy, o/s 5m Left bdy. R.L.22.67.	101.0

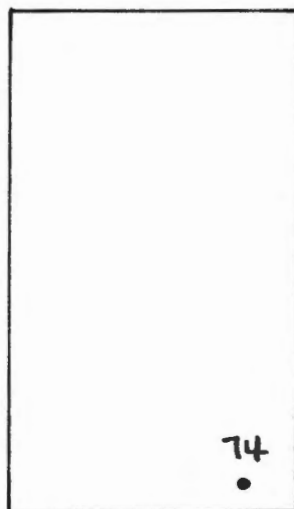
In our opinion fill on Lot 17 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 24**



DRIVEWAY 2

Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
74	14.3.17	o/s 1m Front bdy, o/s 2m Right bdy. R.L.24.15.	95.0

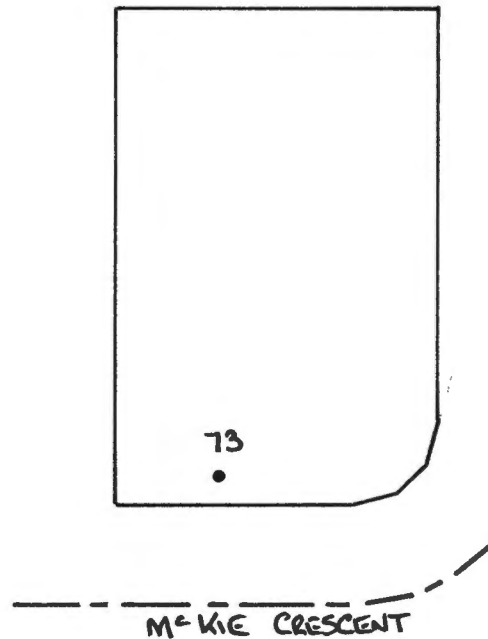
In our opinion fill on Lot 24 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 62**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
73	14.3.17	o/s 1m Front bdy, o/s 5m Left bdy. R.L.21.20.	97.0

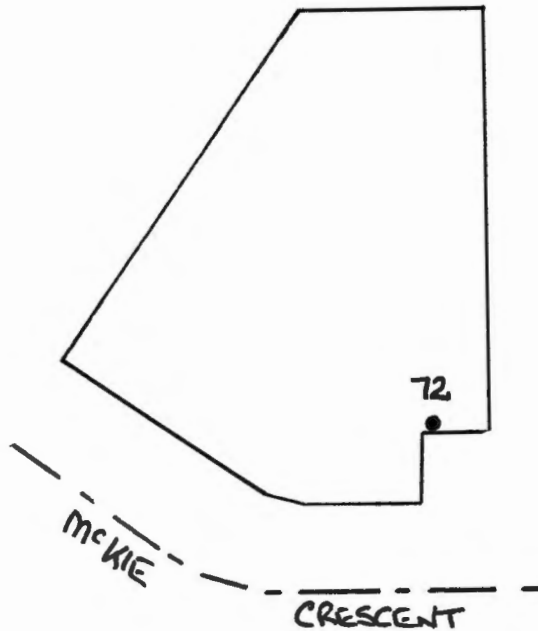
In our opinion fill on Lot 62 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 Standard Compaction) and is considered to comply with the requirements of Table 5.1 of AS3798-2007 and the project specifications. We confirm that filling to design final level can be termed controlled filling in accordance with Section 6.4.2. of AS2870-2011, via a "Level 1" inspection and testing commission.

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**EARTHWORKS SUMMARY REPORT
CANNON HILL COMMUNITY LINKS – STAGE 2
LOT 63**



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
72	14.3.17	o/s 5m Front bdy, o/s 4m Right bdy. 0.15m below F.L.	96.0

In our opinion fill on Lot 63 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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

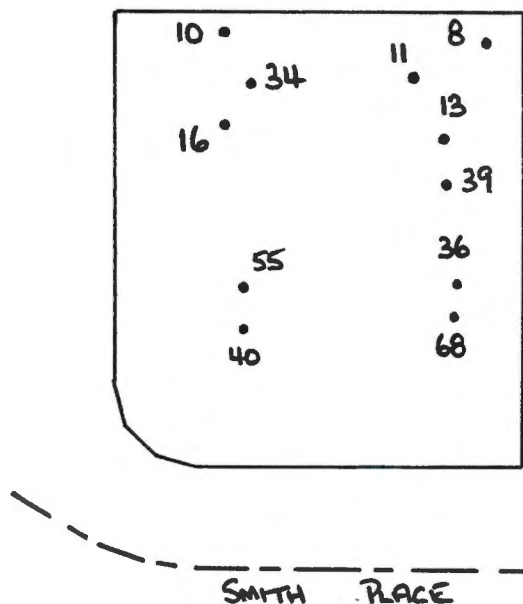


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EARTHWORKS SUMMARY REPORT

CANNON HILL COMMUNITY LINKS – STAGE 2

LOT 76



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
8	18.10.16	o/s 2m Rear bdy, o/s 2m Right bdy. R.L.7.73.	98.0
10	18.10.16	o/s 1m Rear bdy, o/s 5m Left bdy. R.L.7.93.	102.5
11	18.10.16	o/s 4m Rear bdy, o/s 6m Right bdy. R.L.8.34.	99.5
13	19.10.16	o/s 7m Rear bdy, o/s 3m Right bdy. R.L.8.63.	101.5
16	19.10.16	o/s 6m Rear bdy, o/s 5m Left bdy. R.L.8.35.	98.5
34	25.10.16	o/s 4m Rear bdy, o/s 6m Left bdy. R.L.9.29.	98.5
36	26.10.16	o/s 11m Front bdy, o/s 4m Right bdy. R.L.9.92.	95.0
39	27.10.16	o/s 9m Rear bdy, o/s 4m Right bdy. R.L.10.30.	95.0
40	27.10.16	o/s 7m Front bdy, o/s 6m Left bdy. R.L.10.84.	99.0
55	2.11.16	o/s 10m Front bdy, o/s 6m Left bdy. R.L.11.19.	101.0
68	4.11.16	o/s 9m Front bdy, o/s 4m Right bdy. R.L.11.60.	102.0

In our opinion fill on Lot 76 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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

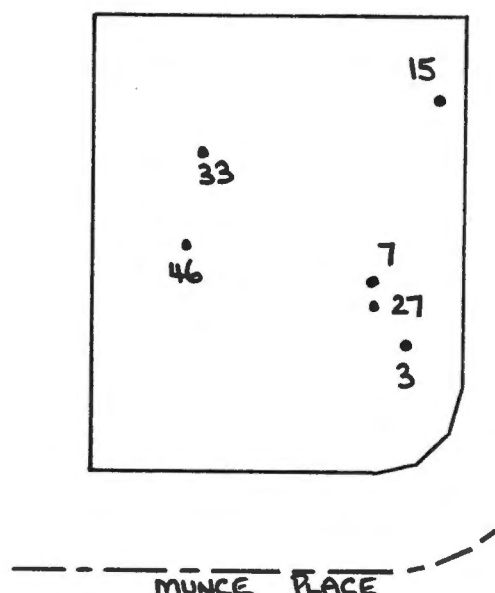


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EARTHWORKS SUMMARY REPORT

CANNON HILL COMMUNITY LINKS – STAGE 2

LOT 77



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
3	17.10.16	o/s 5m Front bdy, o/s 2m Right bdy. R.L.10.32.	96.5
7	17.10.16	o/s 9m Front bdy, o/s 4m Right bdy. R.L.10.70.	98.5
15	19.10.16	o/s 3m Rear bdy, o/s 1m Right bdy. R.L.10.44.	99.0
27	21.10.16	o/s 8m Front bdy, o/s 4m Right bdy. R.L.11.05.	102.0
33	24.10.16	o/s 7m Rear bdy, o/s 5m Left bdy. R.L.11.41.	96.0
46	29.10.16	o/s 11m Front bdy, o/s 4m Left bdy. R.L.11.89.	101.0

In our opinion fill on Lot 77 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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

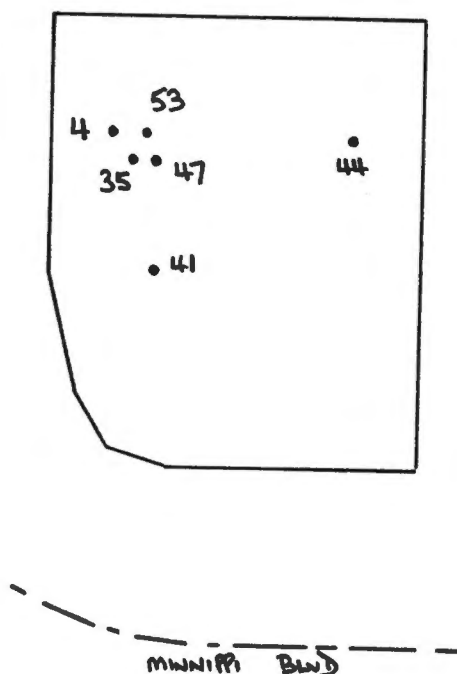


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EARTHWORKS SUMMARY REPORT

CANNON HILL COMMUNITY LINKS – STAGE 2

LOT 78



Field Density Results

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
4	17.10.16	o/s 6m Rear bdy, o/s 3m Left bdy. R.L.8.54.	99.0
35	25.10.16	o/s 7m Rear bdy, o/s 4m Left bdy. R.L.9.30.	100.5
41	28.10.16	o/s 9m Front bdy, o/s 5m Left bdy. R.L.9.94.	104.5
44	28.10.16	o/s 6m Rear bdy, o/s 3m Right bdy. R.L.10.48.	99.5
47	29.10.16	o/s 7m Rear bdy, o/s 5m Left bdy. R.L.10.65.	97.0
53	2.11.16	o/s 6m Rear bdy, o/s 6m Left bdy. R.L.11.24.	97.5

In our opinion fill on Lot 78 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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

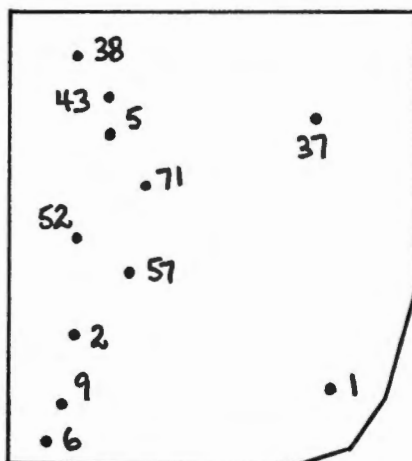


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EARTHWORKS SUMMARY REPORT

CANNON HILL COMMUNITY LINKS – STAGE 2

LOT 79



Field Density Results

— MINNIPPI — BWS —

Page 1 of 1

Test No.	Date Tested	Test Location	Dry Density Ratio AS1289 5.4.1 (Standard)
1	14.10.16	o/s 4m Front bdy, o/s 3m Right bdy. R.L.7.07.	98.0
2	15.10.16	o/s 6m Front bdy, o/s 3m Left bdy. R.L.7.64.	100.0
5	17.10.16	o/s 9m Rear bdy, o/s 4m Left bdy. R.L.7.17.	99.0
6	17.10.16	o/s 1m Front bdy, o/s 2m Left bdy. R.L.5.72.	99.5
9	18.10.16	o/s 3m Front bdy, o/s 2m Left bdy. R.L.6.42.	95.5
37	27.10.16	o/s 4m Rear bdy, o/s 5m Right bdy. R.L.8.37.	98.0
38	27.10.16	o/s 2m Rear bdy, o/s 3m Left bdy. R.L.9.04.	102.5
43	28.10.16	o/s 7m Rear bdy, o/s 4m Left bdy. R.L.9.76.	95.0
52	2.11.16	o/s 10m Front bdy, o/s 3m Left bdy. R.L.10.28.	102.5
57	2.11.16	o/s 8m Front bdy, o/s 5m Left bdy. R.L.10.71.	100.0
71	4.11.16	o/s 11m Rear bdy, o/s 5m Left bdy. R.L.11.13.	96.0

In our opinion fill on Lot 79 has been placed in a controlled manner to achieve a minimum dry density ratio of 95% (AS1289.5.1.1 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.

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