

WORKS INSPECTION & TESTING

AMITY NARANGBA – STAGE 8A

Prepared for CCA Winslow

16/12/2020

JOB NO: P1163





Document Information

Prepared for	CCA Winslow
Report Name	Amity Narangba – Stage 8A
Job Reference	2624/P/1163
Date	16/12/2020
Version Number	01

Contact Information

Construction Sciences	ABN 74 128 806 735
Phone	07 3865 3212
Email	Broddie.krebs@constructionsciences.net
Address	2 Aldinga Street, Brendale 4500

Broddie Krebs
Laboratory Supervisor
Effective date: 16/12/2020

Christopher Pearce
Laboratory manager
Date approved: 16/12/2020

DOCUMENT HISTORY

Version	Effective Date	Revision	Author	Reviewer	Recipient
01	16/12/2020		Broddie Krebs	Christopher Pearce	Jack Williams

© Construction Sciences. Copyright in the whole and every part of this document belongs to Construction Sciences and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person other than by agreement with Construction Sciences.

This document is produced by Construction Sciences solely for the benefit and use by the client in accordance with the terms of the engagement. Construction Sciences does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by any third party on the content of this document.



Contents

Introduction 1

Specification Requirements2

Site Works.....2

Compaction Control Testing2

Conclusion3

Appendices

Appendix A Individual Lot Certification

Appendix B Field Density Test Results

Appendix C Allotment Fill Map

Tables

Table 1 Summary of field density test results - 4



Introduction

Construction Sciences Pty Ltd was commissioned by CCA Winslow to provide Level 1 inspection and testing services for the placement of fill at the residential development:-

PROJECT: Amity Narangba – Stage 8A

ADDRESS: Burpengary & Callaghan Roads

The earthworks were carried out from 22/09/2020 to 8/10/2020.

Scope of Level 1 responsibility: ***“The primary objective of Level 1 Inspection and Testing is for the geotechnical inspection and testing authority (GITA) to be able to express an opinion on the compliance of the work. The GITA is responsible for ensuring that the inspection and testing is sufficient for this purpose.***

The GITA needs to have competent personnel on site at all times while earthwork operations are undertaken. Such operations include the following:

- (a) Completion of removal of topsoil.***
- (b) Placing of imported or cut material.***
- (c) Compaction and adding/removal of moisture.***
- (d) Trenching and backfilling, where applicable.***
- (e) Test rolling.***
- (f) CMT Testing.***

The superintendent should agree on a suitable inspection and testing plan prior to the commencement of the works”.

reference AS3798 – Section 8.2



Specification Requirements

Filling was carried out in accordance with AS3798-2007 '*Guidelines on earthworks for commercial and residential developments*' and with the project specification prepared for the project.

The specification requirements were that all fill was to be placed and compacted in layers to a density ratio of not less than 95% of the maximum density as determined by AS1289.5.7.1 (standard compaction).

Site Works

General: Full time site inspection was maintained in accordance with Level 1 requirements whilst earthworks were carried out on this development. Fill area included multiple residential allotments.

The areas to be filled were stripped and proof rolled in accordance with the specification requirements. The fill material generally comprised of sandy clay.

Compaction Control Testing

Compaction control tests were carried out at regular intervals throughout the placement of fill in accordance with the minimum test frequency recommendations included in AS3798-2007 '*Guidelines on earthworks for commercial and residential developments*'. All test results are included in the Appendix B. A summary of the test results is included as Table 1. A total of 41 field density tests were carried out throughout the earthworks. The average density ratio was 99.5%.



Conclusion

- (a) Our representative attended site whilst bulk earthworks filling was in progress between 22nd September and 8th October 2020 at the Amity development stage 8A
- (b) Pre-fill ground preparation was carried out in accordance with the specifications and site instruction given.
- (c) The results of the compaction control testing indicate that the fill placed during the term of our site attendance, was compacted to at least the minimum specified density ratio.

It is considered that the placement of fill at, Burpengary & Callaghan Roads was carried out in a controlled manner and the fill was compacted to a density ratio not less than the specified requirement. It is concluded that the fill may be deemed to be '*controlled fill*' in accordance with AS2870 – 2011 '*Residential Slabs & Footings*'.



Table 1 Summary of field density test results - WORKS INSPECTION & TESTING

Date	Lot no.	Level (1)	Test location	Density ratio (2)
22/09/2020	Lot 237	Yes	See Report	101.5
24/09/2020	Lot 235	Yes		97.0
24/09/220	Lot 236	Yes		98.5
24/09/2020	Lot 237	Yes		97.0
24/09/2020	Lot 238	Yes		95.5
23/09/2020	Lot 213	Yes		96.0
25/09/2020	Lot 233	Yes		97.5
25/09/2020	Lot 231	Yes		99.0
25/09/2020	Lot 230	Yes		99.5
25/09/2020	Lot 229	Yes		97.0
25/09/2020	Lot 228	Yes		100.5
25/09/2020	Lot 227	Yes		101.5
28/09/2020	Lot 203	Yes		98.0
28/09/2020	Lot 204	Yes		98.5
28/09/2020	Lot 202	Yes		98.5
29/09/2020	Lot 205	Yes		98.0
29/09/2020	Lot 201	Yes		95.5
30/09/2020	Lot 221	Yes		95.0
30/09/2020	Lot 203	Yes		98.5
1/10/2020	Lot 249	Yes		99.0
1/10/2020	Lot 248	Yes		97.0
1/10/2020	Lot 247	Yes		100.5
1/10/2020	Lot 234	Yes		103.0
2/10/2020	Lot 213	Yes		100.5
6/10/2020	Lot 212	Yes		104.5
6/10/2020	Lot 211	Yes		103.0
7/10/2020	Lot 241	Yes		103.0
7/10/2020	Lot 224	Yes		101.5
7/10/2020	Lot 210	Yes		101.5
7/10/2020	Lot 209	Yes		104.5
8/10/2020	Lot 208	Yes		105.0



8/10/2020	Lot 207	Yes	102.5
8/10/2020	Lot 206	Yes	100.0

No. of tests:	41	Mean:	99.5%	Standard Dev:	2.9%
----------------------	----	--------------	-------	----------------------	------

Notes:

1. Standard laboratory compaction used, AS1289.5.7.1





Appendix A

Individual Lot Certification

Ref: 2624/L/203

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 203, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/204

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 204, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/205

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 205, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/206

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 206, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/207

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 207, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/208

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 208, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/209

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**[www.constructionscience
s.net](http://www.constructionsciences.net)**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 209, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/210

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 210, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/211

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 211, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/212

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**[www.constructionscience
s.net](http://www.constructionsciences.net)**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 212, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/213

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 213, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/221

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**[www.constructionscience
s.net](http://www.constructionsciences.net)**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 221, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/224

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**[www.constructionscience
s.net](http://www.constructionsciences.net)**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 224, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/225

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 225, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/226

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**[www.constructionscience
s.net](http://www.constructionsciences.net)**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 226, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/227

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 227, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/228

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 228, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/229

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 229, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/230

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 230, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/231

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 231, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/233

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 233, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/234

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 234, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/235

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 235, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/236

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 236, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/237

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 237, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/238

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 238, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/239

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 239, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/240

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 240, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/241

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 241, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/201

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
**www.constructionscience
s.net**

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 201, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences

Ref: 2624/L/202

Project Ref: 2624/P/1163

**Construction Sciences Pty
Ltd** ABN 74 128 806 735

16/12/2020

2 Aldinga St
Brendale QLD 4500
Australia

CCA Winslow
1587 Ipswich Road
Rocklea QLD

Phone: 61 7 3865 3212
www.constructionscience.net

Dear Sir/Madam,

**INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 202, Amity Narangba Stage 8A**

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 "Guidelines on earthworks for commercial and residential developments".

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be "controlled fill"

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully



Broddie Krebs
Lab Supervisor
For Brisbane North
Construction Sciences



Appendix B

Field Density Test Results



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38905-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23405
Component:	Earthworks	Client Reference/s:	
Area Description:	Generall Fill	Report Date / Page:	7/10/2020 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1
------------------	----------------------------

Sample Number	2624/S/122910	2624/S/122911	2624/S/122912	2624/S/122913
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	24/09/2020	24/09/2020	24/09/2020	24/09/2020
Material Source	Onsite Cut	Onsite Cut	Onsite Cut	Onsite Cut
Material Type	General fill	General fill	General fill	General fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -	150 / - / -	150 / - / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	496050.7	496050.3	496059.7	496069.4
Northing	6992334.8	6992309.1	6992296.6	6992269.1
RL	41.74	40.75	39.87	37.87
	Tadorna St	Tadorna St	Tadorna St	Tadorna St
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	2624/S/122910	2624/S/122911	2624/S/122912	2624/S/122913
Sample Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	2.5	2.0	2.0	2.5
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.91	1.90	2.05	1.99
Adj/Peak Conv Wet Density (t/m³)	1.95	1.90	2.01	1.96
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	98.0	100.0	102.0	101.5

Remarks

	The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing		
	Accreditation Number:	1986	
	Corporate Site Number:	2624	
	Approved Signatory: Broddie Krebs		Form ID: W5ASRep Rev 2



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38905-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23405
Component:	Earthworks	Client Reference/s:	
Area Description:	Generall Fill	Report Date / Page:	7/10/2020 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1
------------------	----------------------------

Sample Number	2624/S/122914	2624/S/122915	2624/S/122916	2624/S/122917
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	24/09/2020	24/09/2020	24/09/2020	24/09/2020
Material Source	Onsite Cut	Onsite Cut	Onsite Cut	Onsite Cut
Material Type	General fill	General fill	General fill	General fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -	150 / - / -	150 / - / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	495994.1	496001.2	496004.4	496006.8
Northing	6992319.5	6992307.4	6992298.3	6992290.9
RL	44.00	43.55	42.49	42.12
	Lot 235	Lot 236	Lot 237	Lot 238
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	2624/S/122914	2624/S/122915	2624/S/122916	2624/S/122917
Sample Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	2.5	2.0	2.0	2.5
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.90	1.99	2.00	1.92
Adj/Peak Conv Wet Density (t/m³)	1.96	2.03	2.06	2.02
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	97.0	98.5	97.0	95.5

Remarks

	The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing		
	Accreditation Number:	1986	
	Corporate Site Number:	2624	
	Approved Signatory: Broddie Krebs		Form ID: W5ASRep Rev 2



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38990-2
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23504
Supplied To:	n/a	Client Reference/s:	
Area Description:	Alotment Fill	Report Date / Page:	15/12/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/123333			
ID / Client ID	-			
Lot Number	-			
Date / Time Tested	23/09/2020			
Material Source	Onsite Cut			
Material Type	Cut Fill			
Sampling Method	AS1289.1.2.1 CI 6.4b			
Depths: Test / Nom / Actual (mm)	150 / - / -			
Standard or Modified	Standard			
Easting	496047.9			
Northing	6992330.4			
RL	41.61			
	Lot 213			
Test Fraction (mm)	< 19.0 mm			
Sample Oversize (%)	14			
Compaction Sample Number	2624/S/123333			
Sample Description	gravelly clay, brown			
Moisture Test Results:				
Field Moisture Content (%)	-			
Adjusted / Moisture Variation (%)	0.0			
Optimum Moisture Content (%)	-			
Moisture Variation from OMC	-			
Moisture Ratio (%)	-			
Density Test Results:				
Field Wet Density (t/m³)	1.91			
Adj/Peak Conv Wet Density (t/m³)	1.99			
Density Ratio Required (%)	95			
Hilf Density Ratio (%)	96.0			

Remarks	Re-Issued Report Replaces Report No 2624/R/38990-1 (reason: Location Description Added).
---------	--

Accredited for compliance with ISO/IEC 17025 – Testing		
	Accreditation Number: 1986 Corporate Site Number: 2624	
		Approved Signatory: Broddie Krebs Form ID: W5ASRep Rev 2

WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38991-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23415
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	13/10/2020 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/122948	2624/S/122949	2624/S/122950	2624/S/122951
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	25/09/2020	25/09/2020	25/09/2020	25/09/2020
Material Source	Onsite Cut	Onsite Cut	Onsite Cut	Onsite Cut
Material Type	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -	150 / - / -	150 / - / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	495993.7	496021.4	496021.6	496025.1
Northing	6992341.1	6992338.8	6992327.3	6992320.7
RL	44.88	43.58	43.09	42.55
	Lot 233	Lot 231	Lot 230	Lot 229
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	8	4	7	5
Compaction Sample Number	2624/S/122948	2624/S/122949	2624/S/122950	2624/S/122951
Sample Description	sandy gravel, clay brown	sandy clay, brown	sandy clay, brown	sandy clay, brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	2.5	4.0	3.5	2.5
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.94	1.93	1.93	1.92
Adj/Peak Conv Wet Density (t/m³)	1.99	1.95	1.94	1.98
Density Ratio Required (%)	95	95	95	95
Half Density Ratio (%)	97.5	99.0	99.5	97.0

Remarks



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation Number: 1986

Corporate Site Number: 2624



Approved Signatory: Mitchell Eaton

Form ID: W5ASRep Rev 2

WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38991-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23415
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	13/10/2020 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/122952	2624/S/122953		
ID / Client ID	-	-		
Lot Number	-	-		
Date / Time Tested	25/09/2020	25/09/2020		
Material Source	Onsite Cut	Onsite Cut		
Material Type	Allotment Fill	Allotment Fill		
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b		
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -		
Standard or Modified	Standard	Standard		
Easting	496024.8	496038.4		
Northing	6992306.2	6992299.1		
RL	42.21	40.91		
	Lot 228	Lot 227		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	3	5		
Compaction Sample Number	2624/S/122952	2624/S/122953		
Sample Description	gravelly clay, dark brown	gravelly clay, brown		
Moisture Test Results:				
Field Moisture Content (%)	-	-		
Adjusted / Moisture Variation (%)	2.5	2.5		
Optimum Moisture Content (%)	-	-		
Moisture Variation from OMC	-	-		
Moisture Ratio (%)	-	-		
Density Test Results:				
Field Wet Density (t/m³)	1.92	1.92		
Adj/Peak Conv Wet Density (t/m³)	1.91	1.90		
Density Ratio Required (%)	95	95		
Hilf Density Ratio (%)	100.5	101.5		

Remarks



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation Number: 1986

Corporate Site Number: 2624



Approved Signatory: Mitchell Eaton

Form ID: W5ASRep Rev 2

WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38993-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23423
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	13/10/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/122977	2624/S/122978	2624/S/122979	
ID / Client ID	-	-	-	
Lot Number	-	-	-	
Date / Time Tested	28/09/2020	28/09/2020	28/09/2020	
Material Source	Onsite Cut	Onsite Cut	Onsite Cut	
Material Type	Allotment Fill	Allotment Fill	Allotment Fill	
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -	150 / - / -	
Standard or Modified	Standard	Standard	Standard	
Easting	496107.4	496115.9	496122.5	
Northing	6992238.6	6992242.5	6992247.1	
RL	33.73	33.83	33.97	
	Lot 203	Lot 204	Lot 202	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	3	0	1	
Compaction Sample Number	2624/S/122977	2624/S/122978	2624/S/122979	
Sample Description	Gravelly Clay, brown	Clay, brown	Gravelly Clay, brown	
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	
Adjusted / Moisture Variation (%)	2.5	2.5	2.5	
Optimum Moisture Content (%)	-	-	-	
Moisture Variation from OMC	-	-	-	
Moisture Ratio (%)	-	-	-	
Density Test Results:				
Field Wet Density (t/m³)	1.92	1.91	1.92	
Adj/Peak Conv Wet Density (t/m³)	1.96	1.94	1.95	
Density Ratio Required (%)	95	95	95	
Hilf Density Ratio (%)	98.0	98.5	98.5	

Remarks



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation Number: 1986

Corporate Site Number: 2624



Approved Signatory: Mitchell Eaton

Form ID: W5ASRep Rev 2



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38996-2
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23438
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	15/12/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/123041	2624/S/123042		
ID / Client ID	-	-		
Lot Number	-	-		
Date / Time Tested	29/09/2020 12:55	29/09/2020 13:02		
Material Source	Onsite Cut	Onsite Cut		
Material Type	Cut Fill	Cut Fill		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	300 / - / -	300 / - / -		
Standard or Modified	Standard	Standard		
Easting	496098.1	496113.8		
Northing	6992237.6	6992247.0		
RL	34.78	34.76		
	Lot 205	Lot 201		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	2624/S/123041	2624/S/123042		
Sample Description	Clay brown	sandy clay, red brown		
Moisture Test Results:				
Field Moisture Content (%)	-	-		
Adjusted / Moisture Variation (%)	2.5	4.0		
Optimum Moisture Content (%)	-	-		
Moisture Variation from OMC	-	-		
Moisture Ratio (%)	-	-		
Density Test Results:				
Field Wet Density (t/m³)	1.92	1.81		
Adj/Peak Conv Wet Density (t/m³)	1.97	1.89		
Density Ratio Required (%)	95	95		
Hilf Density Ratio (%)	98.0	95.5		

Remarks	Re-Issued Report Replaces Report No 2624/R/38996-1 (reason: Location Description Added).
---------	--

		Accredited for compliance with ISO/IEC 17025 – Testing	
Accreditation Number:	1986		
Corporate Site Number:	2624		
Approved Signatory: Broddie Krebs Form ID: W5ASRep Rev 2			



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38997-2
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23453
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	15/12/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/123115	2624/S/123116		
ID / Client ID	-	-		
Lot Number	-	-		
Date / Time Tested	30/09/2020 13:05	30/09/2020 13:08		
Material Source	Onsite Cut	Onsite Cut		
Material Type	Cut Fill	Cut Fill		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	300 / - / -	300 / - / -		
Standard or Modified	Standard	Standard		
Easting	496098.5	496117.1		
Northing	6992253.5	6992250.7		
RL	36.50	35.73		
	Lot 221	Lot 203		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	7	3		
Compaction Sample Number	2624/S/123115	2624/S/123116		
Sample Description	sandy clay, red brown	sandy clay, red brown		
Moisture Test Results:				
Field Moisture Content (%)	-	-		
Adjusted / Moisture Variation (%)	2.5	2.5		
Optimum Moisture Content (%)	-	-		
Moisture Variation from OMC	-	-		
Moisture Ratio (%)	-	-		
Density Test Results:				
Field Wet Density (t/m³)	1.86	1.87		
Adj/Peak Conv Wet Density (t/m³)	1.96	1.90		
Density Ratio Required (%)	95	95		
Hilf Density Ratio (%)	95.0	98.5		

Remarks	Re-Issued Report Replaces Report No 2624/R/38997-1 (reason: Location description added).
---------	--

 Accredited for compliance with ISO/IEC 17025 – Testing Accreditation Number: 1986 Corporate Site Number: 2624		 Approved Signatory: Broddie Krebs Form ID: W5ASRep Rev 2
--	--	--



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38998-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23469
Supplied To:	n/a	Client Reference/s:	
Area Description:	Alotment Fill	Report Date / Page:	14/10/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/123170	2624/S/123171	2624/S/123172	2624/S/123173
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	1/10/2020 11:00	1/10/2020 11:10	1/10/2020 11:15	1/10/2020 11:20
Material Source	Onsite Cut	Onsite Cut	Onsite Cut	Onsite Cut
Material Type	Cut Fill	Cut Fill	Cut Fill	Cut Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -	150 / - / -	150 / - / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	495954.1	495949.6	495954.6	495983.6
Northing	6992310.8	6992299.4	6992292.6	6992323.1
RL	44.44	44.02	43.64	44.50
	Lot 249	Lot 248	Lot 247	Lot 234
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	2	2	0	3
Compaction Sample Number	2624/S/123170	2624/S/123171	2624/S/123172	2624/S/123173
Sample Description	gravelly clay, brown	sandy clay, red brown	Sandy Clay, Red Brown	gravelly clay, brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	2.5	2.5	2.5	4.5
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.97	1.94	1.96	1.99
Adj/Peak Conv Wet Density (t/m³)	1.99	2.00	1.95	1.93
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	99.0	97.0	100.5	103.0

Remarks

	The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing		
	Accreditation Number:	1986	
	Corporate Site Number:	2624	
	Approved Signatory: Mitchell Eaton		Form ID: W5ASRep Rev 2

WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38999-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	213
Location:	Narangba	Internal Test Request:	2624/T/23466
Component:	Alotment Fill	Client Reference/s:	
Area Description:	Alotment Fill - Lots 213-208	Report Date / Page:	14/10/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/123162			
ID / Client ID	-			
Lot Number	213			
Date / Time Tested	2/10/2020 13:10			
Material Source	Onsite Cut			
Material Type	Cut Fill			
Sampling Method	AS1289.1.2.1 CI 6.4b			
Depths: Test / Nom / Actual (mm)	300 / - / -			
Standard or Modified	Standard			
Easting	496069.16			
Northing	6992339.9			
RL	42.40			
	Lot 213			
Test Fraction (mm)	< 19.0 mm			
Sample Oversize (%)	6			
Compaction Sample Number	2624/S/123162			
Sample Description	sandy clay, mottled red white			
Moisture Test Results:				
Field Moisture Content (%)	-			
Adjusted / Moisture Variation (%)	2.5			
Optimum Moisture Content (%)	-			
Moisture Variation from OMC	-			
Moisture Ratio (%)	-			
Density Test Results:				
Field Wet Density (t/m³)	1.96			
Adj/Peak Conv Wet Density (t/m³)	1.96			
Density Ratio Required (%)	95			
Hilf Density Ratio (%)	100.5			

Remarks



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
Accredited for compliance with ISO/IEC 17025 - Testing

Accreditation Number: 1986

Corporate Site Number: 2624



Approved Signatory: Mitchell Eaton

Form ID: W5ASRep Rev 2



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/39065-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/21556
Supplied To:	n/a	Client Reference/s:	
Area Description:	Allotment Fill	Report Date / Page:	19/10/2020 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1
------------------	----------------------------

Sample Number	2624/S/113854	2624/S/113855	2624/S/113856	2624/S/113857
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	6/10/2020 08:45	6/10/2020 08:30	6/10/2020 09:00	6/10/2020 09:30
Material Source	On-Site	On-Site	On-Site	On-Site
Material Type	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / 150 / -	150 / 150 / -	150 / 150 / -	150 / 150 / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	496037.197	496045.417	496002.985	496009.613
Northing	6992289.415	6992278.628	6992275.791	6992267.179
RL	40.510	40.149	41.651	40.922
	Lot 226	Lot 225	Lot 239	Lot 240
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	2624/S/113854	2624/S/113855	2624/S/113856	2624/S/113857
Sample Description	Clay brown	Clay Brown	Clay, brown	Clay brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	2.5	2.5	2.5	2.5
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.82	1.88	1.97	1.84
Adj/Peak Conv Wet Density (t/m³)	1.75	1.84	1.92	1.82
Density Ratio Required (%)	95	95	95	95
Half Density Ratio (%)	104.0	102.5	103.0	101.0

Remarks

 Accredited for compliance with ISO/IEC 17025 – Testing Accreditation Number: 1986 Corporate Site Number: 2624		 Approved Signatory: Mitchell Eaton Form ID: W5ASRep Rev 2
--	--	---



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/39065-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/21556
Supplied To:	n/a	Client Reference/s:	
Area Description:	Allotment Fill	Report Date / Page:	19/10/2020 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1
------------------	----------------------------

Sample Number	2624/S/113858	2624/S/113859		
ID / Client ID	-	-		
Lot Number	-	-		
Date / Time Tested	6/10/2020 13:00	6/10/2020 13:10		
Material Source	On-Site	On-Site		
Material Type	Allotment Fill	Allotment Fill		
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)	150 / 150 / -	150 / 150 / -		
Standard or Modified	Standard	Standard		
Easting	496068.706	496074.013		
Northing	6992324.240	6992318.191		
RL	41.965	41.535		
	Lot 212	Lot 211		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	0	0		
Compaction Sample Number	2624/S/113858	2624/S/113859		
Sample Description	Clay Brown	Clay brown		
Moisture Test Results:				
Field Moisture Content (%)	-	-		
Adjusted / Moisture Variation (%)	2.5	2.5		
Optimum Moisture Content (%)	-	-		
Moisture Variation from OMC	-	-		
Moisture Ratio (%)	-	-		
Density Test Results:				
Field Wet Density (t/m³)	2.01	1.89		
Adj/Peak Conv Wet Density (t/m³)	1.92	1.83		
Density Ratio Required (%)	95	95		
Hill Density Ratio (%)	104.5	103.0		

Remarks

		Accredited for compliance with ISO/IEC 17025 – Testing Accreditation Number: 1986 Corporate Site Number: 2624	 Approved Signatory: Mitchell Eaton Form ID: W5ASRep Rev 2
--	--	---	---

WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/39225-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/21557
Supplied To:	n/a	Client Reference/s:	
Area Description:	Allotment Fill Testing	Report Date / Page:	4/11/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/113860	2624/S/113861	2624/S/113862	2624/S/113863
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	7/10/2020 10:00	7/10/2020 10:20	7/10/2020 13:00	7/10/2020 13:10
Material Source	On-Site	On-Site	On-Site	On-Site
Material Type	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / 150 / 150	150 / 150 / 150	150 / 150 / 150	150 / 150 / 150
Standard or Modified	Standard	Standard	Standard	Standard
Easting	496018.405	496038.872	496082.007	496082.271
Northing	692258.978	692266.903	692308.742	692296.883
RL	39.888	39.300	41.177	39.641
	Lot 241	Lot 224	Lot 210	Lot 209
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	3	12	13	4
Compaction Sample Number	2624/S/113860	2624/S/113861	2624/S/113862	2624/S/113863
Sample Description	sandy clay, brown	Silty Clay with Gravel Dark Brown	Red/Brown Silty Clay with Gravel	sandy gravelly clay, light brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	5.5	5.0	4.0	4.5
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.90	1.85	1.92	1.92
Adj/Peak Conv Wet Density (t/m³)	1.84	1.83	1.89	1.84
Density Ratio Required (%)	-	-	-	-
Hilf Density Ratio (%)	103.0	101.5	101.5	104.5

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing


 Accreditation Number: 1986
 Corporate Site Number: 2624



 Approved Signatory: Mitchell Eaton
 Form ID: W5ASRep Rev 2



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/39226-1
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/21558
Supplied To:	n/a	Client Reference/s:	
Area Description:	Allotment Fill/ Basin D	Report Date / Page:	4/11/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	2624/S/113864	2624/S/113865	2624/S/113866	2624/S/113867
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	8/10/2020 08:10	8/10/2020 09:00	8/10/2020 10:00	8/10/2020 10:50
Material Source	On-Site	On-Site	On-Site	On-Site
Material Type	Allotment Fill	Allotment Fill	Allotment Fill	Allotment Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / 150 / -	150 / 150 / -	150 / 150 / -	150 / 150 / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	496086.384	496091.649	496103.276	496178.315
Northing	6992289.305	6992283.778	6992275.280	6992203.637
RL	39.109	38.697	38.233	30.799
	Lot 208	Lot 207	Lot 206	Basin D
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	1	3
Compaction Sample Number	2624/S/113864	2624/S/113865	2624/S/113866	2624/S/113867
Sample Description	sandy clay, red white	sandy clay, red brown	sandy clay, red brown	sandy clay, brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	3.5	4.0	4.5	2.0
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.98	2.04	1.91	1.87
Adj/Peak Conv Wet Density (t/m³)	1.89	1.99	1.91	1.97
Density Ratio Required (%)	95	95	95	95
Wet Density Ratio (%)	105.0	102.5	100.0	95.0

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing		
	Accreditation Number: 1986 Corporate Site Number: 2624	
		Approved Signatory: Mitchell Eaton Form ID: W5ASRep Rev 2



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38828-2
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23391
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	15/12/2020 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1
------------------	----------------------------

Sample Number	2624/S/122777	2624/S/122778	2624/S/122779	2624/S/122780
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	22/09/2020	22/09/2020	22/09/2020	22/09/2020
Material Source	Existing	Existing	Existing	On-Site
Material Type	GST	GST	GST	General fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	150 / - / -	150 / - / -	150 / - / -	150 / - / -
Standard or Modified	Standard	Standard	Standard	Standard
Easting	495994.7	495989.3	496001.5	496008.9
Northing	6992276.5	6992261.6	6992262.1	6992286.6
RL	41.59	41.11	40.73	41.91
	Lot 239	Everton Street	Lot 240	Lot 238
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	2	2	2	0
Compaction Sample Number	2624/S/122777	2624/S/122778	2624/S/122779	2624/S/122780
Sample Description	Sand Gravel Clay Brown	Sand Gravel Clay Brown	Gravel Sand Clay Brown	Clay Brown
Moisture Test Results:				
Field Moisture Content (%)	-	-	-	-
Adjusted / Moisture Variation (%)	2.5	2.5	2.5	2.0
Optimum Moisture Content (%)	-	-	-	-
Moisture Variation from OMC	-	-	-	-
Moisture Ratio (%)	-	-	-	-
Density Test Results:				
Field Wet Density (t/m³)	1.90	1.88	1.92	1.93
Adj/Peak Conv Wet Density (t/m³)	1.99	1.98	2.00	1.89
Density Ratio Required (%)	95	95	95	98
Hilf Density Ratio (%)	95.0	95.5	96.0	102.0

Remarks	Re-Issued Report Replaces Report No 2624/R/38828-1 (reason: Location description added).
---------	--

 Accredited for compliance with ISO/IEC 17025 – Testing Accreditation Number: 1986 Corporate Site Number: 2624		 Approved Signatory: Broddie Krebs Form ID: W5ASRep Rev 2
--	--	--



WET DENSITY RATIO REPORT

Client:	CCA Winslow	Report Number:	2624/R/38828-2
Client Address:	1587 Ipswich Road, Rocklea	Project Number:	2624/P/1163
Project:	Amity Stage 8A	Lot Number:	
Location:	Narangba	Internal Test Request:	2624/T/23391
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	15/12/2020 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1
------------------	----------------------------

Sample Number	2624/S/122781			
ID / Client ID	-			
Lot Number	-			
Date / Time Tested	22/09/2020			
Material Source	On-Site			
Material Type	General fill			
Sampling Method	AS1289.1.2.1 CI 6.4b			
Depths: Test / Nom / Actual (mm)	150 / - / -			
Standard or Modified	Standard			
Easting	496002.3			
Northing	6992295.7			
RL	42.46			
	Lot 237			
Test Fraction (mm)	< 19.0 mm			
Sample Oversize (%)	0			
Compaction Sample Number	2624/S/122781			
Sample Description	Clay Brown			
Moisture Test Results:				
Field Moisture Content (%)	-			
Adjusted / Moisture Variation (%)	2.5			
Optimum Moisture Content (%)	-			
Moisture Variation from OMC	-			
Moisture Ratio (%)	-			
Density Test Results:				
Field Wet Density (t/m³)	1.90			
Adj/Peak Conv Wet Density (t/m³)	1.88			
Density Ratio Required (%)	98			
Hilf Density Ratio (%)	101.5			

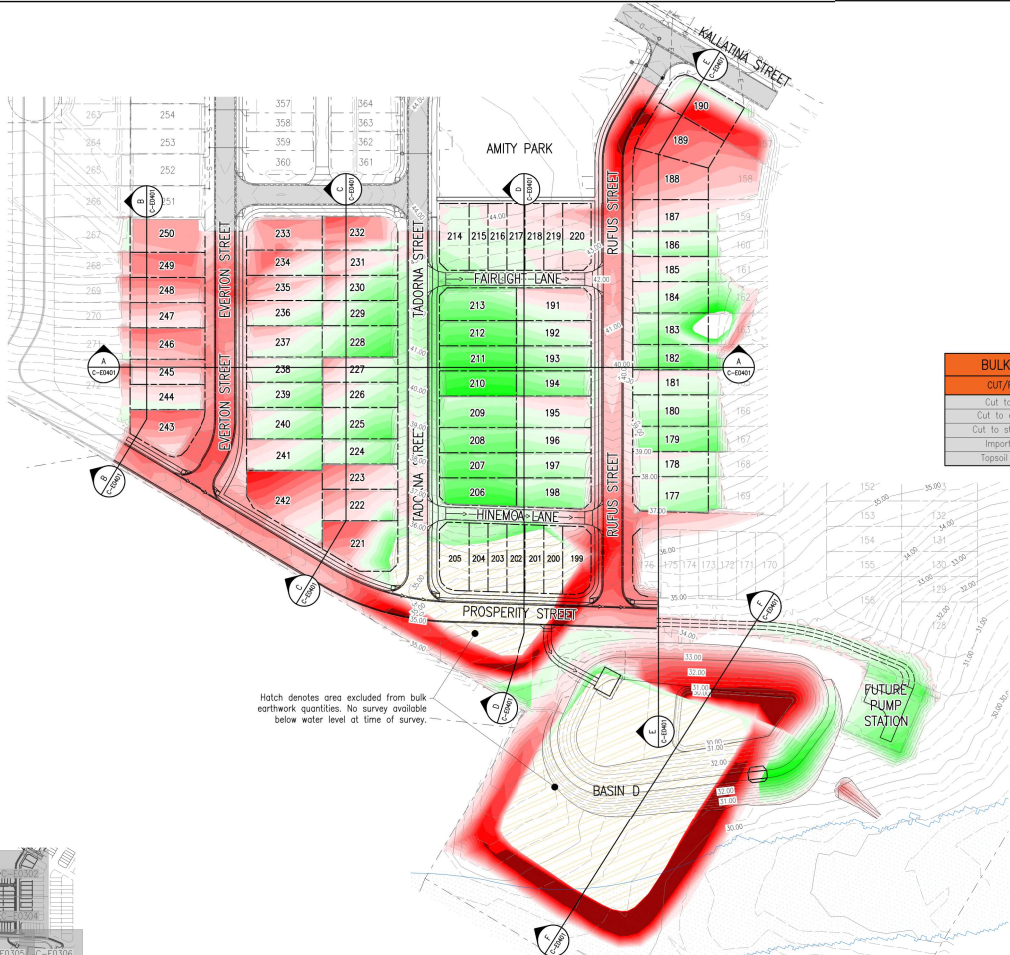
Remarks	Re-Issued Report Replaces Report No 2624/R/38828-1 (reason: Location description added).
---------	--

Accredited for compliance with ISO/IEC 17025 – Testing		
	Accreditation Number: 1986 Corporate Site Number: 2624	
		Approved Signatory: Broddie Krebs Form ID: W5ASRep Rev 2



Appendix C

Allotment Fill Map



CUT TO FILL EXTENT LAYOUT PLAN
Scale 1:750 (A1)

LEGEND:	
	Existing Property Boundary
	Proposed Property Boundary
	Bulk Earthworks Minor Contours
	Bulk Earthworks Major Contours

PLAN NOTES:
P.1. Intervals between data ranges - 0.20m.
P.2. Plans to be plotted in colour to distinguish between the ranges of cut and fill.
P.3. Intervals between contours - 0.25m. Contours are bulk earthworks surface levels.
P.4. All volumes shown are solid state volumes and no bulking factors have been applied.
P.5. Volumes have been calculated based on a topsoil strip of 150mm.
P.6. Volumes are a comparison between stripped natural surface and subgrade surface.

REFERENCE NOTES:
R.1. This drawing is to be read in conjunction with the earthworks and erosion and sediment control drawing set (E Series) as well as all drawings listed on C-E0101.
R.2. Refer to the C-E0100 drawing set for bulk earthworks notes and details.
R.3. Refer to the C-E0400 drawing set for bulk earthwork sections.
R.4. Refer to the C-E0600-E0700 drawing sets for retaining walls.
R.5. Refer to the C-E0800-E0900 drawing sets for erosion and sediment control.
R.6. Refer to the C-R0200 drawing set for pavement design plans.

STAGING NOTES:
S.1. This development is to be constructed as a single stage.

BULK EARTHWORKS VOLUMES	
CUT/FILL	APPROX. VOLUME (m³)
Cut to fill	13,850
Cut to export	-
Cut to stockpile	12,169
Import fill	-
Topsoil strip	8,159

CUT & FILL LEGEND	
Colour	Data Range (m)
	> 4.00
	4.00 to 3.75
	3.75 to 3.50
	3.50 to 3.25
	3.25 to 3.00
	3.00 to 2.75
	2.75 to 2.50
	2.50 to 2.25
	2.25 to 2.00
	2.00 to 1.75
	1.75 to 1.50
	1.50 to 1.25
	1.25 to 1.00
	1.00 to 0.75
	0.75 to 0.50
	0.50 to 0.25
	0.25 to 0.00
	0.00 to -0.25
	-0.25 to -0.50
	-0.50 to -0.75
	-0.75 to -1.00
	-1.00 to -1.25
	-1.25 to -1.50
	-1.50 to -1.75
	-1.75 to -2.00
	-2.00 to -2.25
	-2.25 to -2.50
	-2.50 to -2.75
	-2.75 to -3.00
	-3.00 to -3.25
	-3.25 to -3.50
	-3.50 to -3.75
	-3.75 to -4.00
	> -4.00

SCALE BARS
0 7.5 15 22.5 30m
1:750(A1) 1:1500(A3)

REVISED EARTHWORKS	DATE	BY	CHK	APP
1	13/07/2016	RT	KPM	DAW
2	14/07/2016	RT	KPM	DAW
3	14/07/2016	RT	KPM	DAW
4	14/07/2016	RT	KPM	DAW
5	14/07/2016	RT	KPM	DAW
6	14/07/2016	RT	KPM	DAW
7	14/07/2016	RT	KPM	DAW
8	14/07/2016	RT	KPM	DAW
9	14/07/2016	RT	KPM	DAW
10	14/07/2016	RT	KPM	DAW
11	14/07/2016	RT	KPM	DAW
12	14/07/2016	RT	KPM	DAW
13	14/07/2016	RT	KPM	DAW
14	14/07/2016	RT	KPM	DAW
15	14/07/2016	RT	KPM	DAW
16	14/07/2016	RT	KPM	DAW
17	14/07/2016	RT	KPM	DAW
18	14/07/2016	RT	KPM	DAW
19	14/07/2016	RT	KPM	DAW
20	14/07/2016	RT	KPM	DAW
21	14/07/2016	RT	KPM	DAW
22	14/07/2016	RT	KPM	DAW
23	14/07/2016	RT	KPM	DAW
24	14/07/2016	RT	KPM	DAW
25	14/07/2016	RT	KPM	DAW
26	14/07/2016	RT	KPM	DAW
27	14/07/2016	RT	KPM	DAW
28	14/07/2016	RT	KPM	DAW
29	14/07/2016	RT	KPM	DAW
30	14/07/2016	RT	KPM	DAW
31	14/07/2016	RT	KPM	DAW
32	14/07/2016	RT	KPM	DAW
33	14/07/2016	RT	KPM	DAW
34	14/07/2016	RT	KPM	DAW
35	14/07/2016	RT	KPM	DAW
36	14/07/2016	RT	KPM	DAW
37	14/07/2016	RT	KPM	DAW
38	14/07/2016	RT	KPM	DAW
39	14/07/2016	RT	KPM	DAW
40	14/07/2016	RT	KPM	DAW
41	14/07/2016	RT	KPM	DAW
42	14/07/2016	RT	KPM	DAW
43	14/07/2016	RT	KPM	DAW
44	14/07/2016	RT	KPM	DAW
45	14/07/2016	RT	KPM	DAW
46	14/07/2016	RT	KPM	DAW
47	14/07/2016	RT	KPM	DAW
48	14/07/2016	RT	KPM	DAW
49	14/07/2016	RT	KPM	DAW
50	14/07/2016	RT	KPM	DAW
51	14/07/2016	RT	KPM	DAW
52	14/07/2016	RT	KPM	DAW
53	14/07/2016	RT	KPM	DAW
54	14/07/2016	RT	KPM	DAW
55	14/07/2016	RT	KPM	DAW
56	14/07/2016	RT	KPM	DAW
57	14/07/2016	RT	KPM	DAW
58	14/07/2016	RT	KPM	DAW
59	14/07/2016	RT	KPM	DAW
60	14/07/2016	RT	KPM	DAW
61	14/07/2016	RT	KPM	DAW
62	14/07/2016	RT	KPM	DAW
63	14/07/2016	RT	KPM	DAW
64	14/07/2016	RT	KPM	DAW
65	14/07/2016	RT	KPM	DAW
66	14/07/2016	RT	KPM	DAW
67	14/07/2016	RT	KPM	DAW
68	14/07/2016	RT	KPM	DAW
69	14/07/2016	RT	KPM	DAW
70	14/07/2016	RT	KPM	DAW
71	14/07/2016	RT	KPM	DAW
72	14/07/2016	RT	KPM	DAW
73	14/07/2016	RT	KPM	DAW
74	14/07/2016	RT	KPM	DAW
75	14/07/2016	RT	KPM	DAW
76	14/07/2016	RT	KPM	DAW
77	14/07/2016	RT	KPM	DAW
78	14/07/2016	RT	KPM	DAW
79	14/07/2016	RT	KPM	DAW
80	14/07/2016	RT	KPM	DAW
81	14/07/2016	RT	KPM	DAW
82	14/07/2016	RT	KPM	DAW
83	14/07/2016	RT	KPM	DAW
84	14/07/2016	RT	KPM	DAW
85	14/07/2016	RT	KPM	DAW
86	14/07/2016	RT	KPM	DAW
87	14/07/2016	RT	KPM	DAW
88	14/07/2016	RT	KPM	DAW
89	14/07/2016	RT	KPM	DAW
90	14/07/2016	RT	KPM	DAW
91	14/07/2016	RT	KPM	DAW
92	14/07/2016	RT	KPM	DAW
93	14/07/2016	RT	KPM	DAW
94	14/07/2016	RT	KPM	DAW
95	14/07/2016	RT	KPM	DAW
96	14/07/2016	RT	KPM	DAW
97	14/07/2016	RT	KPM	DAW
98	14/07/2016	RT	KPM	DAW
99	14/07/2016	RT	KPM	DAW
100	14/07/2016	RT	KPM	DAW

RMA
Engineers

www.rmaengineers.com.au

CLIENT
DAHUA POINTCORP
NARANGBA PTY LTD

PROJECT
AMITY NARANGBA - PHASE 5
BURPENGARY & CALLAGHAN ROADS
NARANGBA QLD 4504

TYPE
CUT TO FILL EXTENT LAYOUT PLAN

REVISIONS

1	14/07/2016	RT	KPM	DAW
2	14/07/2016	RT	KPM	DAW
3	14/07/2016	RT	KPM	DAW
4	14/07/2016	RT	KPM	DAW
5	14/07/2016	RT	KPM	DAW
6	14/07/2016	RT	KPM	DAW
7	14/07/2016	RT	KPM	DAW
8	14/07/2016	RT	KPM	DAW
9	14/07/2016	RT	KPM	DAW
10	14/07/2016	RT	KPM	DAW
11	14/07/2016	RT	KPM	DAW
12	14/07/2016	RT	KPM	DAW
13	14/07/2016	RT	KPM	DAW
14	14/07/2016	RT	KPM	DAW
15	14/07/2016	RT	KPM	DAW
16	14/07/2016	RT	KPM	DAW
17	14/07/2016	RT	KPM	DAW
18	14/07/2016	RT	KPM	DAW
19	14/07/2016	RT	KPM	DAW
20	14/07/2016	RT	KPM	DAW
21	14/07/2016	RT	KPM	DAW
22	14/07/2016	RT	KPM	DAW
23	14/07/2016	RT	KPM	DAW
24	14/07/2016	RT	KPM	DAW
25	14/07/2016	RT	KPM	DAW
26	14/07/2016	RT	KPM	DAW
27	14/07/2016	RT	KPM	DAW
28	14/07/2016	RT	KPM	DAW
29	14/07/2016	RT	KPM	DAW
30	14/07/2016	RT	KPM	DAW
31	14/07/2016	RT	KPM	DAW
32	14/07/2016	RT	KPM	DAW
33	14/07/2016	RT	KPM	DAW
34	14/07/2016	RT	KPM	DAW
35	14/07/2016	RT	KPM	DAW
36	14/07/2016	RT	KPM	DAW
37	14/07/2016	RT	KPM	DAW
38	14/07/2016	RT	KPM	DAW
39	14/07/2016	RT	KPM	DAW
40	14/07/2016	RT	KPM	DAW
41	14/07/2016	RT	KPM	DAW
42	14/07/2016	RT	KPM	DAW
43	14/07/2016	RT	KPM	DAW
44	14/07/2016	RT	KPM	DAW
45	14/07/2016	RT	KPM	DAW
46	14/07/2016	RT	KPM	DAW
47	14/07/2016	RT	KPM	DAW
48	14/07/2016	RT	KPM	DAW
49	14/07/2016	RT	KPM	DAW
50	14/07/2016	RT	KPM	DAW
51	14/07/2016	RT	KPM	DAW
52	14/07/2016	RT	KPM	DAW
53	14/07/2016	RT	KPM	DAW
54	14/07/2016	RT	KPM	DAW
55	14/07/2016	RT	KPM	DAW
56	14/07/2016	RT	KPM	DAW
57	14/07/2016	RT	KPM	DAW
58	14/07/2016	RT	KPM	DAW
59	14/07/2016	RT	KPM	DAW
60	14/07/2016	RT	KPM	DAW
61	14/07/2016	RT	KPM	DAW
62	14/07/2016	RT	KPM	DAW
63	14/07/2016	RT	KPM	DAW
64	14/07/2016	RT	KPM	DAW
65	14/07/2016	RT	KPM	DAW
66	14/07/2016	RT	KPM	DAW
67	14/07/2016	RT	KPM	DAW
68	14/07/2016	RT	KPM	DAW
69	14/07/2016	RT	KPM	DAW
70	14/07/2016	RT	KPM	DAW
71	14/07/2016	RT	KPM	DAW
72	14/07/2016	RT	KPM	DAW
73	14/07/2016	RT	KPM	DAW
74	14/07/2016	RT	KPM	DAW
75	14/07/2016	RT	KPM	DAW
76	14/07/2016	RT	KPM	DAW
77	14/07/2016	RT	KPM	DAW
78	14/07/2016	RT	KPM	DAW
79	14/07/2016	RT	KPM	DAW
80	14/07/2016	RT	KPM	DAW
81	14/07/2016	RT	KPM	DAW
82	14/07/2016	RT	KPM	DAW
83	14/07/2016	RT	KPM	DAW
84	14/07/2016	RT	KPM	DAW
85	14/07/2016	RT	KPM	DAW
86	14/07/2016	RT	KPM	DAW
87	14/07/2016	RT	KPM	DAW
88	14/07/2016	RT	KPM	DAW
89	14/07/2016	RT	KPM	DAW
90	14/07/2016	RT	KPM	DAW
91	14/07/2016	RT	KPM	DAW
92	14/07/2016	RT	KPM	DAW
93	14/07/2016	RT	KPM	DAW
94	14/07/2016	RT	KPM	DAW
95	14/07/2016	RT	KPM	DAW
96	14/07/2016	RT	KPM	DAW
97	14/07/2016	RT	KPM	DAW
98	14/07/2016	RT	KPM	DAW
99	14/07/2016	RT	KPM	DAW
100	14/07/2016	RT	KPM	DAW

REVISIONS

1	14/07/2016	RT	KPM	DAW
2	14/07/2016	RT	KPM	DAW
3	14/07/2016	RT	KPM	DAW
4	14/07/2016	RT	KPM	DAW
5	14/07/2016	RT	KPM	DAW
6	14/07/2016	RT	KPM	DAW
7	14/07/2016	RT	KPM	DAW
8	14/07/2016	RT	KPM	DAW
9	14/07/2016	RT	KPM	DAW
10	14/07/2016	RT	KPM	DAW
11	14/07/2016	RT	KPM	DAW
12	14/07/2016	RT	KPM	DAW
13	14/07/2016	RT	KPM	DAW
14	14/07/2016	RT	KPM	DAW
15	14/07/2016	RT	KPM	DAW
16	14/07/2016	RT	KPM	DAW
17	14/07/2016	RT	KPM	DAW
18	14/07/2016	RT	KPM	DAW
19	14/07/2016	RT	KPM	DAW
20	14/07/2016	RT	KPM	DAW
21	14			

Located across Australia and New Zealand

QLD

Airlie
Beenleigh
Brisbane (Acacia Ridge)
Brisbane (Beenleigh)
Brisbane (Brendale)
Brisbane (Petrie)
Cairns
Emerald
Gladstone
Gold Coast
Mackay
Moranbah
Rockhampton
Petrie
Sunshine Coast
Toowoomba
Townsville

NSW

Ballina
Coffs Harbour
Grafton
Lynwood
Newcastle
Sydney (Glendenning)
Sydney (Seven Hills)
Sydney (St Peters)
Taree
Wollongong

VIC

Ararat
Bendigo
Echuca
Melbourne (Chadstone)
Melbourne (Keysborough)
Melbourne (Pakenham)
Melbourne (Oaklands Junction)
Melbourne (Sunshine West)
Traralgon

WA

Bunbury
Kalgoorlie
Newman
Perth
Port Hedland

SA

Adelaide
Port Augusta

NT

Darwin

ACT

Canberra

NZ

Wellington