



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509

Ph (07) 3491 6499 Fax (07) 3491 6299

Email: [admin@ryangeotech.com.au](mailto:admin@ryangeotech.com.au)

Loganholme

9/8 Riverland Drive Loganholme QLD 4129.

Ph (07) 3209 8152 Fax (07) 3209 8153

Email: [s.hunter@ryangeotech.com.au](mailto:s.hunter@ryangeotech.com.au)

[www.ryangeotech.com.au](http://www.ryangeotech.com.au)



## Level One Report

**Naric Civil Pty Ltd**

Riverbank Estate  
Stage 18B,

Lot 1008 Market Drive,  
Caboolture South

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au



## Contents

1	Scope .....	3
2	Foundation Preparation .....	4
2.1	Stripping of Area .....	4
2.2	Removal of Unsuitable Materials .....	4
3	Controlled Filling .....	4
4	Compaction Control Operations.....	4
5	Conclusion .....	5
6	Limitations .....	6
	Appendix A .....	7
	Site Plan.....	8
	Appendix B .....	9
	Testing Summary .....	10
	Appendix C .....	12
	Individual Lot Certificates.....	13



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

September 2019

Naric Civil Pty Ltd  
P.O.Box 150  
Redbank Qld 4301

## **Re: Riverbank Estate Stage 18B, Lot 1008 Market Drive, Caboolture South. Geotechnical Testing & Certification.**

### **1 Scope**

Ryan & Associates Geotechnical was commissioned by Naric Civil Pty Ltd to provide geotechnical inspections, testing and certification of the filling earthworks at the above-mentioned project.

The project was assumed to be a Residential development as per "AS3798 – 2007 Guidelines on Earthworks for Commercial and Residential Developments to Level one requirement as outlined in Section 8".

The development comprises of 24 proposed Lots being constructed on previously developed land, controlled filling works has been completed to Lots 851, 852, 877 – 885, & 928 - 940 as detailed on earthworks drawing 17-002277.2 - 200 Refer to Appendix A "Site Plans" drawing number 17-002277.2 - 200.

Ryan & Associates Geotechnical maintained a site presence during the works in accordance with AS3798 – 2007 Level 1. Appendix B – Testing Summary, of this report, contains the testing summary of all testing undertaken with achieved compaction densities.

Site inspections and compaction control testing was carried out as work progressed, with records compiled on all aspects of the earthworks.

This level one report does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

September 2019  
JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## 2 Foundation Preparation

### 2.1 *Stripping of Area*

All existing topsoil materials were stripped prior to the commencement of filling operations.

### 2.2 *Removal of Unsuitable Materials*

No unsuitable material was required to be removed prior to filling apart from topsoil materials.

## 3 Controlled Filling

Fill used consisted of on-site cut / imported materials. Fills were placed using an Excavator and Grader in layers not exceeding 0.2m. The fill zones were compacted using an 815 Compactor.

## 4 Compaction Control Operations

Compliance testing of fill operations was performed by Ryan & Associates Geotechnical between the Months of August - September 2019.

The test results show, where applicable, a Dry Density Ratio of 95% standard or greater was consistently achieved for testing performed on fill materials.

Testing results are shown in the Testing Summary; refer to Appendix B – Testing Summary of this report.



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au



## 5 Conclusion

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in accordance with good engineering practice and can be considered controlled fill. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”, Clause 8.2.

**RYAN & ASSOCIATES**  
Geotechnical Pty Ltd.

**Stephen Roberts**  
Laboratory Manager



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au



## 6 Limitations

This level one certification report verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable. As far as could be determined the earthworks at the time of completion have been carried out to meet the requirements of the drawing and specification.

This level one report makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one report only covers earthworks filling as detailed in the earth works drawings.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches, retaining walls bridging layers, top soil or any pavements

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

**Head Office North Lakes**  
4/20 Burke Crescent North Lakes QLD 4509  
**Ph** (07) 3491 6499 **Fax** (07) 3491 6299  
**Email:** admin@ryangeotech.com.au

**Loganholme**  
9/8 Riverland Drive Loganholme QLD 4129.  
**Ph** (07) 3209 8152 **Fax** (07) 3209 8153  
**Email:** s.hunter@ryangeotech.com.au  
**www.ryangeotech.com.au**

## Appendix A

### Site Plan





ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509

Ph (07) 3491 6499 Fax (07) 3491 6299

Email: admin@ryangeotech.com.au

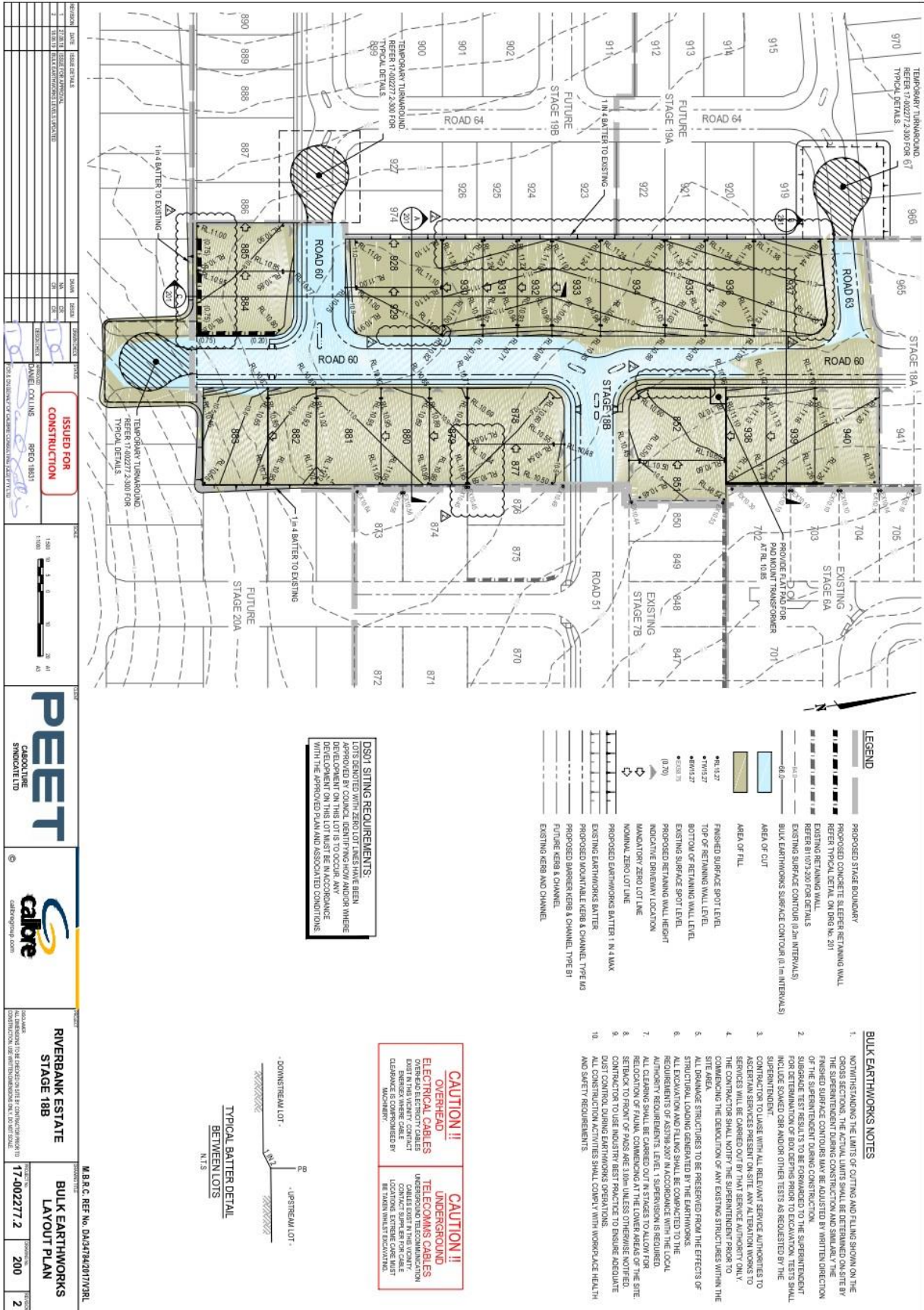
Loganholme

9/8 Riverland Drive Loganholme QLD 4129.

Ph (07) 3209 8152 Fax (07) 3209 8153

Email: s.hunter@ryangeotech.com.au

www.ryangeotech.com.au



REVISION	DATE	ISSUED BY	DATE	REASON
1	27/08/19	JANET DOOLING	28/08/19	ISSUED FOR CONSTRUCTION
2	02/09/19	JANET DOOLING	02/09/19	ISSUED FOR CONSTRUCTION
3	02/09/19	JANET DOOLING	02/09/19	ISSUED FOR CONSTRUCTION



RIVERBANK ESTATE  
STAGE 188

BULK EARTHWORKS  
LAYOUT PLAN

DATE: 17-09-2019

SCALE: 200

PROJECT: 2

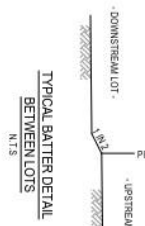
M.B.R.C. REF No. DA54744201V1R

**DS01 SITING REQUIREMENTS:**  
LOTS BOUNDARY WITH ZERO LOT TAKES HAVE BEEN IDENTIFIED ON THIS LOT. ANY DEVELOPMENT ON THIS LOT MUST BE IN ACCORDANCE WITH THE APPROVED PLAN AND ASSOCIATED CONDITIONS.

- LEGEND**
- PROPOSED STAGE BOUNDARY
  - PROPOSED CONCRETE STEEP RETAINING WALL REFER TYPICAL DETAIL ON DRG No. 201
  - EXISTING RETAINING WALL REFER 81 107-200 FOR DETAILS
  - EXISTING SURFACE CONTOUR (0.2m INTERVALS)
  - BULK EARTHWORKS SURFACE CONTOUR (1m INTERVALS)
  - AREA OF CUT
  - AREA OF FILL
  - FINISHED SURFACE SPOT LEVEL
  - TOP OF RETAINING WALL LEVEL
  - BOTTOM OF RETAINING WALL LEVEL
  - EXISTING SURFACE SPOT LEVEL
  - PROPOSED RETAINING WALL HEIGHT
  - INDICATIVE DRIVEWAY LOCATION
  - MANUALLY ZERO LOT LINE
  - NOMINAL ZERO LOT LINE
  - PROPOSED EARTHWORKS BATTER: 1 IN 4 MAX
  - EXISTING EARTHWORKS BATTER
  - PROPOSED MOUNTABLE KERB & CHANNEL TYPE A3
  - PROPOSED BARRIER KERB & CHANNEL TYPE B1
  - FUTURE KERB & CHANNEL
  - EXISTING KERB AND CHANNEL

- BULK EARTHWORKS NOTES**
- NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE CROSS SECTIONS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SHALL BE THE FINISHED SURFACE CONTROLS MAY BE ADJUSTED BY WRITTEN INSTRUCTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
  - SUBGRADE TEST RESULTS TO BE FORWARDED TO THE SUPERINTENDENT. THE SUPERINTENDENT SHALL BE ADVISED OF ANY TESTS THAT FAIL TO MEET THE REQUIREMENTS AS REQUESTED BY THE SUPERINTENDENT.
  - CONTRACTOR TO USE WITH ALL RELEVANT SERVICE AUTHORITIES TO ASCERTAIN SERVICES PRESENT ON SITE. ANY ATTENTION WORKS TO SERVICES WILL BE CARRIED OUT BY THAT SERVICE AUTHORITY ONLY.
  - THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO THE DEMOLITION OF ANY EXISTING STRUCTURES WITHIN THE SITE.
  - ALL DRIVAGE STRUCTURES TO BE PRESERVED FROM THE EFFECTS OF STRUCTURAL LOADING GENERATED BY THE EARTHWORKS.
  - ALL EXCAVATION AND FILLING SHALL BE COMPACTED TO THE LOCAL AUTHORITY REQUIREMENTS LEVEL. SUPERVISION IS REQUIRED.
  - RELOCATION OF ALL UTILITIES SHALL BE COMPLETED IN THE UPPER AREAS OF THE SITE. SETBACK TO FRONT OF PLOTS ARE 2.0m UNLESS OTHERWISE NOTIFIED.
  - CONTRACTOR TO USE INDUSTRY BEST PRACTICE TO ENSURE ADEQUATE DUST CONTROL DURING EARTHWORKS OPERATIONS.
  - CONTRACTOR TO USE INDUSTRY BEST PRACTICE TO ENSURE ADEQUATE DUST CONTROL DURING CONSTRUCTION.
  - ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

**CAUTION !!**  
OVERHEAD ELECTRICAL CABLES  
UNDERGROUND TELECOMMS CABLES  
UNIDENTIFIED CABLES MAY BE PRESENT IN THIS VENTILATED SPACE. CONTRACTOR SHALL CONTACT SUPPLIER FOR CABLE IDENTIFICATION AND REMOVAL PRIOR TO ANY WORK. ALL WORK SHALL BE UNDER SUPERVISION.







ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

**Head Office North Lakes**  
4/20 Burke Crescent North Lakes QLD 4509

**Ph** (07) 3491 6499 **Fax** (07) 3491 6299

**Email:** admin@ryangeotech.com.au

**Loganholme**

9/8 Riverland Drive Loganholme QLD 4129.

**Ph** (07) 3209 8152 **Fax** (07) 3209 8153

**Email:** s.hunter@ryangeotech.com.au

**www.ryangeotech.com.au**

## Appendix B

### Testing Summary

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

**Head Office North Lakes**  
4/20 Burke Crescent North Lakes QLD 4509

**Ph** (07) 3491 6499 **Fax** (07) 3491 6299

**Email:** [admin@ryangeotech.com.au](mailto:admin@ryangeotech.com.au)

**Loganholme**

9/8 Riverland Drive Loganholme QLD 4129.

**Ph** (07) 3209 8152 **Fax** (07) 3209 8153

**Email:** [s.hunter@ryangeotech.com.au](mailto:s.hunter@ryangeotech.com.au)

**[www.ryangeotech.com.au](http://www.ryangeotech.com.au)**

## Appendix C

### Individual Lot Certificates

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 851**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B**

**Lot 1008 Market Drive, Caboolture South**

**Lot 852**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 877**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



**BULK FILL OPERATIONS TESTING CERTIFICATE**

**(As per AS3798-2007 - Level 1)**

**Riverbank Estate Stage 18B**  
**Lot 1008 Market Drive, Caboolture South**

**Lot 878**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

**S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au  
Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B**

**Lot 1008 Market Drive, Caboolture South**

**Lot 879**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE (As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 880

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 881**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au  
Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 882

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092





ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509

Ph (07) 3491 6499 Fax (07) 3491 6299

Email: admin@ryangeotech.com.au

Loganholme

9/8 Riverland Drive Loganholme QLD 4129.

Ph (07) 3209 8152 Fax (07) 3209 8153

Email: s.hunter@ryangeotech.com.au

www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B**

**Lot 1008 Market Drive, Caboolture South**

**Lot 883**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

**S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 884**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 885**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 928

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 929

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092





ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 930

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 931

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 932

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE (As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 933

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au  
Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 934**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au  
Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 935

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092





ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B**

**Lot 1008 Market Drive, Caboolture South**

**Lot 936**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au  
Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 937

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au  
Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

### Lot 938

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

#### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 939**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

Head Office North Lakes  
4/20 Burke Crescent North Lakes QLD 4509  
Ph (07) 3491 6499 Fax (07) 3491 6299  
Email: admin@ryangeotech.com.au

Loganholme  
9/8 Riverland Drive Loganholme QLD 4129.  
Ph (07) 3209 8152 Fax (07) 3209 8153  
Email: s.hunter@ryangeotech.com.au  
www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18B  
Lot 1008 Market Drive, Caboolture South**

**Lot 940**

The results obtained from compaction control testing together with onsite supervision made during earthworks operations indicate that fill materials were consistently placed in a controlled manner and in accordance with good engineering practice. As far as could be determined the earthworks have been carried out to meet the requirements of the drawings and specifications.

The earthworks at the time of completion have been carried out to meet the requirements of Level 1 Certification as per AS3798 – 2007 “Guidelines on Earthworks for Commercial and Residential Development”.

This level one certificate verifies that all supervised fill placed meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.2 - 200.

This level one certificate makes no reference to previous filling works if any or natural ground and its suitability to future design beyond its acceptance of passing proof rolling.

This level one certificate does not cover any fill placed by others prior to or after Ryan & Associates controlled filling works.

Unless otherwise stated, this Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction and serviceability.

This Level 1 Certification does not include backfill to service trenches or retaining walls.

A full geotechnical site investigation/classification and foundation design for the specific ground conditions should be carried out by a suitably qualified and experienced professional, prior to building when the structure type and location is known.

### **S. Roberts**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

September 2019

JOB NUMBER: R19-092