



ABN 16 607 643 229

# **RYAN & ASSOCIATES GEOTECHNICAL PTY LTD**

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## **Level One Report**

**Naric Civil Pty Ltd**

**Riverbank Estate  
Stage 18A,**

**Lot 1008 Market Drive,  
Caboolture South**



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

02/10/19

## **Re: Riverbank Estate Stage 18A, 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 25 proposed Lots being constructed on previously developed land, controlled filling works has been completed to Lots 941 – 944 & Lots 957 - 965 as detailed on earthworks drawing 17-002277.1 – 200 Revision 2 Refer to Appendix A "Site Plans" drawing number 17-002277.1 – 200 Revision 2

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.



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## 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.



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## 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.

**Chris Wilmington**

Senior Technician

October 2019

JOB NUMBER: R19-092



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## 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 be 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.



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## Appendix A

### Site Plan





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## Appendix B

### Testing Summary





















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## Appendix C

### Individual Lot Certificates

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## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

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

### Lot 941

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 up to approximately 0.8m of supervised fill was placed and meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.1 – 200 Revision 2

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.

### C. Wilmington

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

October 2019

JOB NUMBER: R19-092



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## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

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

### Lot 942

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.

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### C. Wilmington

for and on behalf of

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Enc. Drawing showing lateral extent of controlled filling

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## BULK FILL OPERATIONS TESTING CERTIFICATE

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**Riverbank Estate Stage 18A**

**Lot 1008 Market Drive, Caboolture South**

**Lot 943**

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.

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for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

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

### Lot 944

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

### Lot 957

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for and on behalf of

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

### Lot 958

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### C. Wilmington

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

### Lot 959

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### C. Wilmington

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

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**Lot 1008 Market Drive, Caboolture South**

**Lot 960**

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.

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## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

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

### Lot 961

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.

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## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18A**

**Lot 1008 Market Drive, Caboolture South**

**Lot 962**

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 up to approximately 0.8m of supervised fill was placed and meets the minimum requirements of 95% standard compaction where applicable as per drawing numbered 17-002277.1 – 200 Revision 2

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.

### **C. Wilmington**

for and on behalf of

**RYAN & ASSOCIATES GEOTECHNICAL**

Enc. Drawing showing lateral extent of controlled filling

October 2019

JOB NUMBER: R19-092



ABN 16 607 643 229

# RYAN & ASSOCIATES GEOTECHNICAL PTY LTD

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www.ryangeotech.com.au

## BULK FILL OPERATIONS TESTING CERTIFICATE

(As per AS3798-2007 - Level 1)

**Riverbank Estate Stage 18A**

**Lot 1008 Market Drive, Caboolture South**

**Lot 963**

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## BULK FILL OPERATIONS TESTING CERTIFICATE

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

### Lot 965

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