

Pursuant to the *Economic Development Act 2012*, this plan forms part of the MEDQ Delegate's approval for

Approval No.: 7251/2018/MAPDA/
A

Date: 11 February 2026



Road Traffic Noise Assessment

Proposed Residential Subdivision

At Bayliss Road, South Ripley

On Behalf of HB Land

25BRA0139 R01_0



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Revision Record

No.	Author	Reviewed/Approved	Description	Date
A	S Yorke	A Ashworth	Internal draft	06/08/2025
B	S Yorke	A Ashworth	Internal draft	28/08/2025
O	S Yorke	A Ashworth	Client issue	28/08/2025

Executive Summary

Colliers was engaged by HB Land to undertake a road traffic noise assessment of a proposed residential subdivision located at Bayliss Road, South Ripley.

At the time of this report, council had issued an Information Request (dated 19 May, 2025) in response to the *Assessment and Control of Road Traffic Noise Intrusion* report by Acoustics RB Pty Ltd (March 2022). The Item 5 Noise requirement of “minimising reliance on acoustic barriers” is addressed in this assessment by removing the acoustic barriers. The acoustic barriers were previously recommended in the Acoustics RB report however at the time of this project’s development application, there were no relevant planning scheme code requirements that require acoustic barriers to be used. Additionally, experience with similar past projects confirmed that the approach of not using acoustic barriers was the favoured approach by council.

Noise modelling of road traffic noise from Bayliss Road and North-South Link Road indicates that there are residential lots that are road traffic noise affected. These lots are detailed in Table 4.

Future dwellings on noise affected lots should have a lot specific acoustic assessment conducted to determine if acoustic upgrades are required. This should be done in accordance with the road traffic noise assessment method of AS3671-1989 to achieve the internal design sound levels of AS2107-2016.

Compliance with the Ipswich City Council planning scheme 2006 (the applicable version for this application) and relevant noise criteria in relation to road traffic noise impacts is predicted based on the implementation of the recommendations outlined in Section 6 of this report.

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1 Introduction

1.1 Background

Colliers was engaged by HB Land to undertake a road traffic noise assessment of a proposed residential subdivision located at Bayliss Road, South Ripley. This report will form part of the development application for consideration by Ipswich City Council.

At the time of this report, council had issued an Information Request (dated 19 May, 2025) in response to the *Assessment and Control of Road Traffic Noise Intrusion* report by Acoustics RB Pty Ltd (March 2022). The Item 5 Noise requirement of “minimising reliance on acoustic barriers” is addressed in this assessment by removing the acoustic barriers. The acoustic barriers were previously recommended in the Acoustics RB report however at the time of this project’s development application, there were no relevant planning scheme code requirements that require acoustic barriers to be used. Additionally, experience with similar past projects confirmed that the approach of not using acoustic barriers was the favoured approach by council.

1.2 References

This report is based on the following:

- Ipswich City Council Planning Scheme 2006 (applicable version for this application)
- Development plans shown in Appendix A
- Road traffic data from the *Assessment and Control of Road Traffic Noise Intrusion* report by Acoustics RB Pty Ltd (Ref: 18-988.R01 dated March 2022)
- Analysis and calculations conducted by Colliers

1.3 Scope

The assessment includes the following:

- Description of the site.
- Statement of assessment criteria relating to road traffic noise impacts.
- Prediction of future road traffic noise onto the development.
- Analysis of predicted noise levels.
- Determining road traffic noise affected lots and associated noise impact level.

2 Site Description

2.1 Site Location

The site is described by the following:

- Bayliss Road, South Ripley
- Lot 7 on RP836942, Lot 78 on SP308008

The site locality is shown in Figure 1.

Figure 1: Site Locality



2.2 Current Acoustic Conditions

The site is bound by Bayliss Road to the north and Coleman Road to the west. The current acoustic environment at the site is primarily comprised of intermittent local road traffic noise from the surrounding road network.

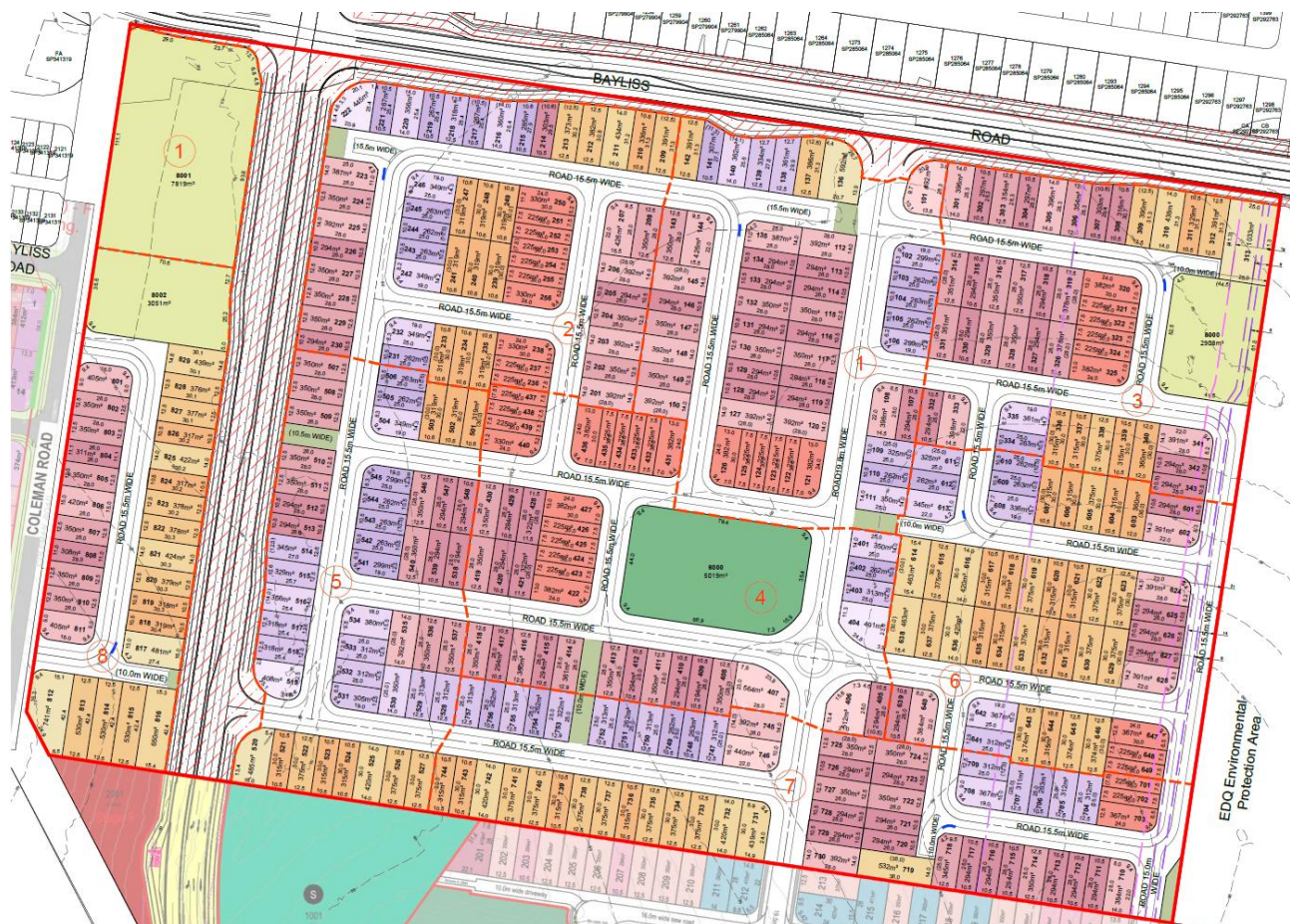
3 The Proposed Development

3.1 Development Description

The proposal is to develop the site into a residential subdivision.

A site plan is presented in Figure 2. Further development plans are shown in Appendix A.

Figure 2: Site Plan



4 Road Traffic Noise Criteria

Council had requested that road traffic noise be assessed from Bayliss Road to the north and a new North-South Link Road through the site.

The Ipswich City Council Planning Scheme (2006) does not reference specific road traffic noise criteria.

For consistency with the previous road traffic noise report by Acoustics RB, the AS3671-1989 construction categories are referenced in this report for depicting the road traffic noise levels. The AS3671-1989 construction categories and traffic noise reductions (TNR) for residential buildings are summarised in Table 1.

Table 1: AS3671-1989 Construction Categories For Residential Buildings

AS3671 Construction Category	AS3671 Traffic Noise Reduction (TNR) dB(A)	L _{10,18hr} dB(A)* Façade Corrected
Category 4	> 35	> 73
Category 3	>25 ≤35	>63 ≤73
Category 2	>10 ≤25	>48 ≤63
Category 1	≤10	≤48

*Based on AS2107 internal criteria 35dB(A), $L_{eq,1hr}$ to $L_{10,18hr}$ typical conversion for road traffic noise and façade correction of 2.5dB (Acoustics RB report, Attachment B, page 28).

Category 1 noise levels are considered to be adequately attenuated by standard dwelling construction (masonry and lightweight). Not noise affected. (AS3671-1989 Section 3.2.1)

Category 2 noise levels are considered to be adequately attenuated by masonry construction. Lightweight construction should be acoustically designed to determine if additional attenuation is required. Noise affected if lightweight construction. (AS3671-1989 Section 3.2.2)

Category 3 and 4 noise levels should be acoustically designed. Noise affected. (AS3671-1989 Section 3.2.3)

It is recommended that future dwellings on noise affected lots are designed in accordance with the road traffic noise assessment method of AS3671-1989 to achieve the internal design sound levels of AS2107-2016.

5 Analysis - Road Traffic Noise

An assessment of road traffic noise onto the proposed development was conducted to determine the road traffic noise impact levels for noise affected lots.

5.1 Traffic Volumes

Traffic volumes and heavy vehicle percentages were referenced from the road traffic noise report by Acoustics AB (page 16). The traffic volumes used in the noise model are presented in Table 2.

Table 2: Traffic Volumes used in the Noise Model

Road	Traffic Volumes (AADT)	Heavy Vehicles (%)
	2032	
Bayliss Road	11,458	4.0
North-South Link Road	9,194	4.0

The 18-hour traffic volumes used in the noise model are taken to be 95% of the AADT (Annual Average Daily Traffic).

5.2 Noise Model

5.2.1 Noise Modelling Parameters

Road traffic noise predictions were conducted using 'SoundPLAN v9.1', a CoRTN based modelling program. The basis of the 'SoundPLAN' model is presented in Table 3. Road surface and speed limits were based on the Acoustics RB report.

Table 3: Noise Modelling Parameters

Description	Value
Noise modelling standard	CoRTN
Grid spacing (noise maps)	2m
Road surface type	DGA (+0 dB(A))
CoRTN correction for QLD roads (Except Pacific Motorway between Logan Motorway to Nerang)	-0.7dB(A) (free field) -1.7dB(A) (façade corrected)
Ground contours	Surrounding area: 2023 DEM 1m (Elvis) Site: Design bulk earthwork levels (Appendix A)
Road speed limits	Bayliss Road: 70 km/h North-South Link Road: 70 km/hr
Noise source height above grade	0.5m
Ground floor receiver height	1.8m above ground level
First floor receiver height	4.6m above ground level
Façade correction	+2.5 dB(A)

5.3 Predicted Road Traffic Noise Levels

Modelling was conducted to determine road traffic noise levels at the development in the 10-year planning horizon.

Predicted road traffic noise contour maps at the ground and first floors are presented in Figure 3 and Figure 4 respectively.

Figure 3: Predicted Road Traffic Noise Levels – Ground Level

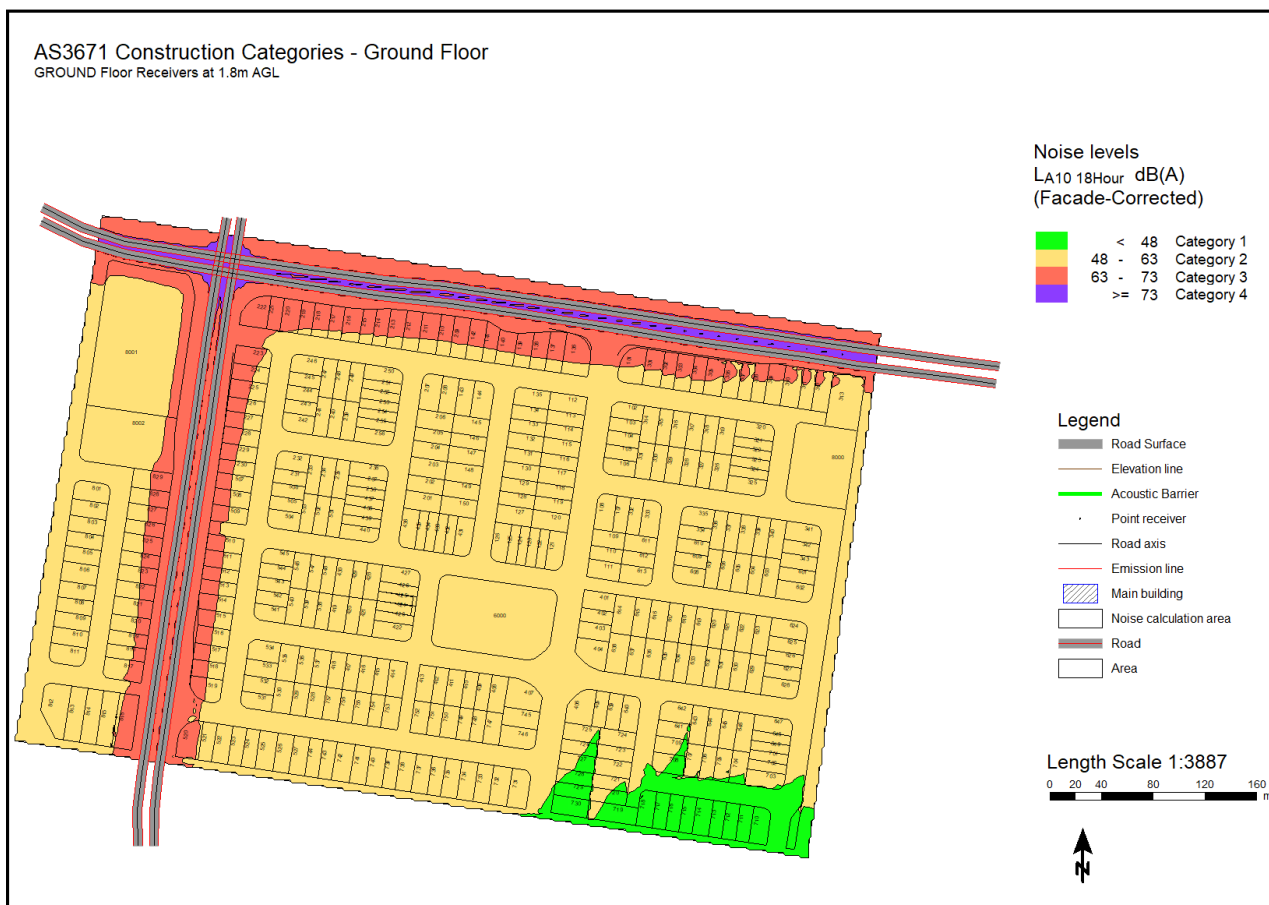
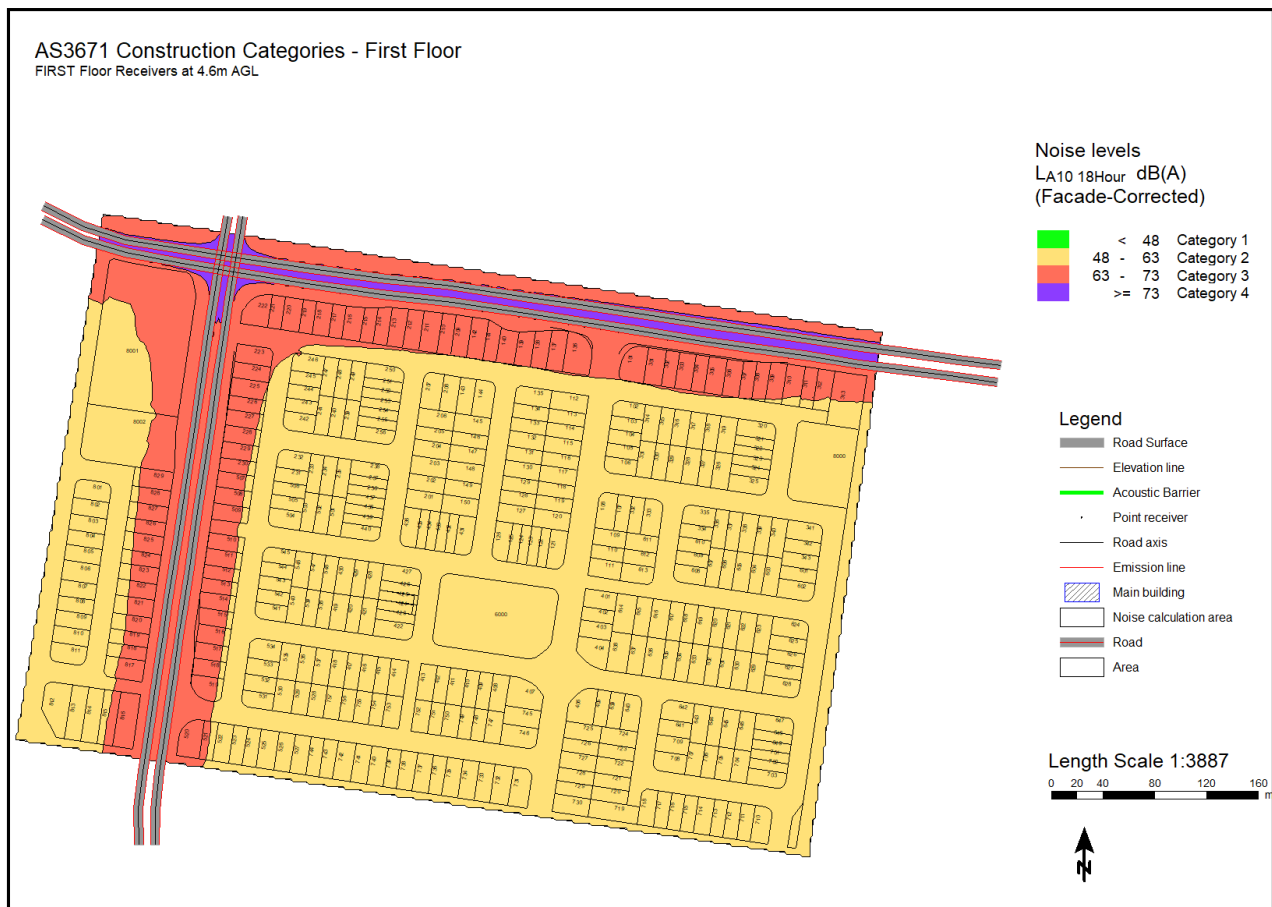


Figure 4: Predicted Road Traffic Noise Levels – First Floor



Road traffic noise levels range from AS3671 construction category 1 - 3 for ground floors and category 2 - 3 for first floors. Noise affected lots are detailed in Section 6.

6 Recommendations

6.1 Noise Affected Lots

This section summarises the road traffic noise affected lots in accordance with AS3671-1989 construction categories. Noise affected lots are presented in Table 4.

Table 4: Road Traffic Noise Affected Lots

AS3671 Construction Category (Not QDC MP4.4)	Floor	Lots	Lot Specific Acoustic Assessment Required?
1	Ground Floor	710 – 718 729, 730	Not noise affected. Standard construction adequate.
2	Ground Floor	All lots excluding Category 1 and 3 lots (ground floor)	Lot specific assessment required in accordance with AS3671 if applicable dwelling floor level includes lightweight external wall materials such as fibrous cement, rendered polystyrene, profiled metal etc or all glass facades such as fully glazed walls separating living spaces from al fresco areas*
	First Floor	All lots excluding Category 3 lots (first floor)	
3	Ground Floor	101 136 – 142 209 - 230 301 – 313 507 - 520 816 – 829	Lot specific assessment required in accordance with AS3671
	First Floor	Same as Ground Floor and 521, 815	
4	Any	None	

*Based on AS3671-1989 Section 3.2.2 requirement

Dwellings on noise affected lots as described in Table 4, should have an individual acoustic assessment conducted in accordance with AS3671-1989 and the internal sound levels of AS2107-2016, once building plans are available, to determine if acoustic façade upgrades are required and if so, to optimise upgrades for quality and cost savings.

7 Conclusion

Colliers was engaged by HB Land to undertake a road traffic noise assessment of a proposed residential subdivision located at Bayliss Road, South Ripley.

Compliance with the Ipswich City Council planning scheme in relation to road traffic noise impacts is predicted based on the implementation of the recommendations outlined in Section 6 of this report.

Appendix A Development Plans

Earthworks Plan

