



ACOUSTICAL CONSULTANTS

GOLD COAST
27 Paradise Ave Miami Qld 4220
P: (07) 5527 7333 F: (07) 5527 7555
Postal: PO Box 441 Mermaid Beach Qld 4218

BRISBANE
Level 36 Riparian Plaza 71 Eagle St Brisbane Qld 4000
P: (07) 3121 3198 F: (07) 3121 3030

SYDNEY
Level 26, 44 Market St Sydney NSW 2000
P: (02) 9089 8752 F: (02) 9089 8842

E: info@crg.net.au www.crg.net.au

CRG Acoustics Pty Ltd ACN 151 847 255
In association with CRG Traffic Pty Ltd

**RE: ROAD TRAFFIC NOISE CONTROL REQUIREMENTS TO DWELLINGS
FERNGROVE RESIDENTIAL ESTATE, BALLINA**

The Ferngrove Estate is adjacent to the Pacific Highway and the Link Road (which will in future be connected to areas west of the estate). Ballina Shire Council require that any dwellings proposed within lots affected by road traffic noise be designed and constructed to meet certain noise standards. The relevant noise standards are as follows:

- Australian / New Zealand AS2107: 2000 “*Acoustics – Recommended design sound levels and reverberation times for building interiors*”. This standard sets the acceptable level of noise inside habitable spaces.
- Australian Standard AS3671 – 1989 “*Acoustics – Road traffic noise intrusion – Building siting and construction*”. This standard provides the methodology to calculate the required acoustical performance ratings for external building shell components to achieve a required indoor noise limit.
- New South Wales EPA “*Environmental Criteria for Road traffic Noise*”. This regulation sets required noise levels from road traffic in outdoor recreation space.

BUILDING TREATMENTS FOR NOISE CONTROL

A plan (attached) has been produced that shows the level of impact from road traffic noise from the Pacific Highway to the immediate north-east of the estate and Link Road to the immediate south-east of the estate. The levels of noise treatment are defined in this plan as follows:

- **Lots most heavily affected (marked in yellow).** Any dwellings proposed for these lots require both the top and ground floor levels to be assessed for road noise intrusion. Rooms that rely on windows exposed to road noise will require air conditioning or mechanical ventilation to allow occupants of these dwellings to close windows to meet the noise limit criteria. A letter is required that provides advice on the required acoustical performance rating for each external building element, and also provides advice on whether rooms require ventilation treatments. Typically, for two storey buildings, bedrooms at the top floor level require windows of 6mm thick glass, with air conditioning or mechanical ventilation (it must be stressed that this indication of treatment is merely an illustration, and each room must be assessed on a case by case basis, as potentially, acoustic performances may be higher depending upon the design). This assessment is offered at a fixed fee of \$242 inclusive of GST for a single storey dwelling, and \$363 inclusive of GST for a two storey dwelling.

- **Lots moderately affected (marked in blue).** Any dwellings proposed for these lots require air conditioning or mechanical ventilation of top floor level of two storey dwellings to allow occupants of these dwellings to close windows to meet the noise limit criteria. Rooms that rely on windows exposed to road noise only require this treatment. If the room has a window facing away from the highway, then it is likely that no ventilation treatment is needed. A letter is required to identify if ventilation treatments are needed. This assessment is offered at a fixed fee of \$165 inclusive of GST for a two storey dwelling.
- **Lots least affected (marked in red).** Any dwellings proposed for these lots require air conditioning or mechanical ventilation of either ground or top floor level dwellings to allow occupants of these dwellings to close windows to meet the noise limit criteria. Rooms that rely on windows exposed to road noise only require this treatment. If the room has a window facing away from the highway and the Link Road, then it is likely that no ventilation treatment is needed. A letter is required to identify if ventilation treatments are needed.

This assessment is offered at a fixed fee of \$165 inclusive of GST for either a single or a two storey dwelling.

OUTDOOR RECREATION SPACE

The row of lots nearest the highway and the future link road also require provision of private open space on the far side of the building from the highway and Link Road. This space needs to be large enough to cater for passive recreation, being area suitable for a garden table and chairs. Refer to the attached sketch illustrating the location of private open space on lots adjacent to the highway and future link road. This issue would be addressed as part of the assessment required for building treatment.

I trust the above is of assistance; please feel free to call me should you wish to discuss any aspect.

Report Compiled By:



JAY CARTER BSc
Director



LEGEND

- Lots requiring building design and construction at ground and top floor levels in accordance with AS 3671 – 1989 'Road traffic noise intrusion – Building siting and construction'; and air-conditioning or mechanical ventilation.
- Lots requiring air-conditioning or mechanical ventilation at top floor levels only (if constructed).
- Lots requiring provision of air-conditioning or mechanical ventilation at ground and top floor levels.

Sketch Illustration of Location Of Open Space Areas In Lots Adjacent To The Highway or Link Road

