

20211504.1/2211A/R0/AS

22/11/2021

Trio Industries Pty Ltd
115 Merrivale Lane
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Attn: Benedetta Gozzi

142 Ocean Street, Narrabeen - Roof Terrace Noise Assessment

This letter has been prepared to address potential acoustic privacy concerns relating to the proposed residential development at 142 Ocean Street, Narrabeen known as Trio Narrabeen Apartments. In particular, the request for information in regard to Development Application No: DA2021/1166 by Northern Beaches Council concerning the proposed roof terrace as part of the key issues of concern for the development, as shown below:

5. Amenity Impact

The roof terrace is in close proximity to the primary aspect of many neighbouring units to the north and as such, is likely to cause a detrimental impact to their acoustic amenity. Accordingly, an Acoustic Report (prepared by an appropriately qualified person) is to be provided to include mitigation measures in the built design to ameliorate any impact to neighbours, and to demonstrate that any impact is not unreasonable.

We note that the roof terrace will be a private open space solely for the residences of apartment 3. Also, that there are no specific noise emission criteria for use of a residential private open space, and guidelines such as the commonly adopted NSW EPA Noise Policy for Industry (NPI) are not appropriate for assessment of this noise type.

Many noise emission guidelines (including the NPI) typically adopt noise emission trigger levels with reference to the background noise level such as Background+5dB(A). A problem with this criteria, is if applied to residential private open space, any development can be made to be either compliant or non-compliant, depending on the assumptions adopted.

For example, one person speaking with average vocal effort is likely to meet a Background+5dB(A) noise requirements, yet a small group speaking with slightly raised voice will not. Both of these scenarios, however, are in keeping with the reasonable use of private open space. If this were to be strictly applied to all residential developments, potentially any balcony or private open space can be found to be non-compliant.

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As such, in order to assess the reasonableness of the roof terrace, a comparative assessment to other types of private open space is more useful. A useful comparison is to examine the level of acoustic separation between:

- Adjacent backyards in a typical free-standing residential development scenario, and
- The separation achieved by the proposed roof terrace at 142 Ocean Street, Narrabeen to the existing three storey neighbouring development to the immediate north of the development.

In a typical backyard scenario, the two properties will commonly be separated by only a dividing fence, and that fence itself may be effectively acoustically transparent (it offers no effective noise mitigation). Assuming a typical 10m by 10m backyard, the acoustic separation between backyards will be approximately 20-25dB(A). In the event that there is a solid 1.8m high fencing dividing the properties, this separation is likely to increase to approximately 27-32dB(A), excluding any second floor windows of the property which may be overlooking.

When considering the roof terrace, a distance of approximately 7m is provided from the closest edge of the terrace. Considering noise attenuation from the distance alone this would result in an acoustic separation between the terrace and closest adjoining balconies of approximately 27-29dB(A).

Notwithstanding, the current proposal includes provision for a 1.6m high solid screen to the northern aspect of the rooftop terrace. Where either a solid balustrade is provided, or the planters are constructed to a similar height to act as noise screens (i.e. solid and imperforate), the additional attenuation would provide a noise separation of approximately 32-34dB(A).

It is not relevant to consider noise disturbance that may be caused by a party or similar. It must be borne in mind that use of the terrace for a party would be an atypical event. Loud music and a private open space filled to capacity, *regardless of size/position*, can have the ability to generate noise disturbance. This risk applies to backyards/terraces of any size and position. Antisocial/unreasonable behaviour would be addressed by police complaint, as is the case for any residential development.

Given that a backyard is considered inherently reasonable with respect to acoustics in typical residential development design, the roof terraces must also be considered reasonable, as they provide a similar or higher noise separation to adjoining uses.

Please contact us should you have any further queries.

Yours faithfully,

A handwritten signature in black ink that reads "asalazar". The signature is written in a cursive, lowercase style.

Acoustic Logic Pty Ltd
Alex Salazar