

26 July 2021

Gemma-Rose Brooke
The Planning Collective

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By email: s 9(2)(a)

Dear Gemma-Rose,

Noise and vibration advice for proposed fast-track application, 201-203 Browns Bay Road

Matvin Group have engaged Styles Group Acoustics and Vibration Consultants to provide acoustic expertise to accompany the fast-track resource consent application for 201-203 Browns Bay Road (the Site).

This advice sets out our experience, the scope of our engagement on this project and confirms we are able to provide an assessment and recommendations to address the relevant noise and vibration criteria of the Auckland Unitary Plan (AUP).

1.0 Our role and expertise

Styles Group Acoustics and Vibration Consultants provide specialist expertise across New Zealand in all aspects of environmental acoustics, including environmental noise, ground and structural vibration, underwater noise, and building, inter-tenancy and room acoustics.

Our expertise relevant to this project includes:

- The preparation and review of a significant number of acoustic assessments across New Zealand involving the management of construction noise and vibration effects under relevant District Plan standards and NZS6803:1999 *Acoustics – Construction Noise*. These assignments range from small-medium scale residential developments to large scale, multi-story, residential, commercial and mixed-use developments, and major infrastructure projects.
- The preparation and review of a significant number of applications subject to the AUP construction noise and vibration standards. We hold a comprehensive understanding of the typical construction noise and vibration effects arising from development proposals under the AUP zoning framework and development controls.
- Extensive experience in the development and administration of construction noise and vibration management plans to identify, require and enable the adoption of the best practicable option to minimise adverse construction noise and vibration effects and minimise any infringements of the permitted construction noise and vibration limits.

2.0 The key noise considerations for the proposal

The proposal is to demolish the existing buildings on the Site and to construct 51 apartments in four blocks. The Site and receivers to the western boundary are in the Residential-Mixed Housing Urban Zone of the AUP. The receivers to the northern and eastern boundary are in the Residential-Mixed Housing Suburban Zone. Access to the Site is gained from a shared right of way. We understand extensive earthworks will be required.

We have reviewed the preliminary project plans to understand the key noise considerations for the proposal and to determine any reasons for consent under the relevant noise and vibration standards of the AUP.

Construction noise and vibration effects

Chapter E25 provides standards to manage and control noise and vibration effects from construction activities. We anticipate that the construction noise and vibration effects from this project will be typical of a medium-to-large scale residential development, involving:

- Demolition of existing buildings and vegetation removal
- Bulk earthworks, including excavation, compaction, and drilling for the construction of retaining walls and building foundations
- Construction of accessways and outdoor areas
- Construction and fit-out of the apartment buildings

The project does not involve any high-noise or vibration activities such as rock-breaking and the proposed earthworks period will be typical for an infill residential development of this scale. We anticipate the proposal will be typical in terms of predicted noise and vibration levels and construction duration.

We anticipate the proposal will require resource consent for minor and intermittent exceedances to the construction noise and vibration amenity limits of the AUP. These are detailed in Section 4.0 of this advice. We expect that the vibration limits designed to avoid damage to buildings will be complied with at all times.

Operational noise

The proposal is for a residential development in a residential zone. We have not identified any operational noise concerns associated with the proposal. This is because:

- The activity is solely residential. There are no noise generating activities (i.e café or other commercial activities) proposed on the Site.
- The communal rubbish and parking areas are well separated from adjacent sites.

We are confident that the proposal can comply with the maximum permitted noise levels in residential zones prescribed in Standard E25.6.2

3.0 Construction noise and vibration effects

We have reviewed the preliminary project plans to determine the key construction noise and vibration effects from the proposal.

Our preliminary assessment is that:

- The nature and duration of the works required will be typical for a residential development of this scale. We understand the project will not involve any high-noise or high vibration activities such (i.e. rock-breaking)
- It will not be practicable for the proposed works to consistently comply with the AUP permitted construction noise limits as heavy plant will be operated near to the site boundaries from time to time, and construction vehicles will utilise the shared accessway in proximity to existing dwellings.
- The permitted vibration standards for protecting neighbouring buildings against damage by construction vibration will be complied with at all times, however the permitted construction vibration amenity limit of 2 mm/s set out in E25.6.30(1)(b) may be intermittently exceeded if vibratory compaction is undertaken near to occupied dwelling(s).

We recommend that a comprehensive construction noise and vibration assessment (CNV) is prepared to manage the effects of the works. This will include construction noise and vibration predictions at the nearby receivers and will confirm the noise mitigation and management measures to ensure that construction noise and vibration effects at nearby receivers will be reasonable. The assessment will include noise and vibration limits for the project that must be complied with.

We are confident that the potential effects of the exceedances to the permitted noise and vibration standards can be appropriately managed through acoustic mitigation measures that will be specified in a Construction Noise and Vibration Management Plan (CNVMP). The primary function of the CNVMP is to set out how the noise and vibration limits will be complied with. The CNVMP will set out minimum separation distances, detailed noise and vibration management and mitigation measures (including communications with receivers) and screening requirements for compliance.

Based on our involvement with a significant number of residential developments across Auckland, it is not typically practicable for residential developments to fully comply with the permitted construction noise and vibration amenity standards when there are occupied dwellings and multi-level buildings nearby. This project will be similar.

The objectives and policies (E25.2 and E25.3) of the AUP seek to enable construction works that cannot practicably comply with the noise and vibration standards while controlling duration, frequency and timing to manage adverse effects. Our assessment and CNVMP will set out the best practicable option to ensure that noise effects are consistent with the relevant objectives and policies and reasonable under section 16 of the Resource Management Act 1991.

Reasons for consent

We anticipate that the proposal will require resource consent as a restricted discretionary activity for intermittent and marginal exceedances to the following Chapter E25 standards:

- The permitted construction noise limits of E25.6.27 when measured and assessed at the façade of 525 East Coast Bays Road and 191 Browns Bay Road.
- The permitted vibration amenity limits of E25.6.30 (b) when measured and assessed at the closest apartments at 525 East Coast Bays Road (if apartments are occupied during works).

Figure 1 identifies the proximate receivers, where exceedances to the construction noise and construction vibration amenity limits are likely to occur. This assessment is preliminary, and a detailed assessment will be undertaken when we have a full understanding of the construction methodology.



Figure 1 The Site and receivers where exceedances to the construction noise and vibration limits are predicted (preliminary assessment only)

5.0 Conclusion

Styles Group are undertaking a comprehensive construction noise and vibration assessment for the proposed residential development at 201-203 Browns Bay Road. We will prepare a detailed CNVMP to accompany the construction phase. The CNVMP will identify, require and enable the adoption of the best practicable option to minimise adverse construction noise and vibration effects and minimise any infringements of the permitted construction noise and vibration limits.

Based on our involvement with a significant number of residential developments across Auckland, it is not typically practicable for residential developments to fully comply with the permitted construction noise and vibration amenity standards when there are occupied dwellings and multi-level buildings nearby. This proposal will be similar.

E25.2 and E25.3 of the AUP seek to enable construction works that cannot practicably comply with the noise and vibration standards while controlling duration, frequency and timing to manage adverse effects. Our assessment and CNVMP will set out the best practicable option to ensure that noise effects are consistent with the relevant objectives and policies and are reasonable under section 16 of the Resource Management Act 1991.,

We anticipate that these assessments will be straightforward and do not expect that there will be any particular challenges in achieving a reasonable level of noise and vibration in the surrounding environment.

Please contact me if you require any further information.

Yours sincerely,



Jon Styles, MASNZ
Director and Principal