

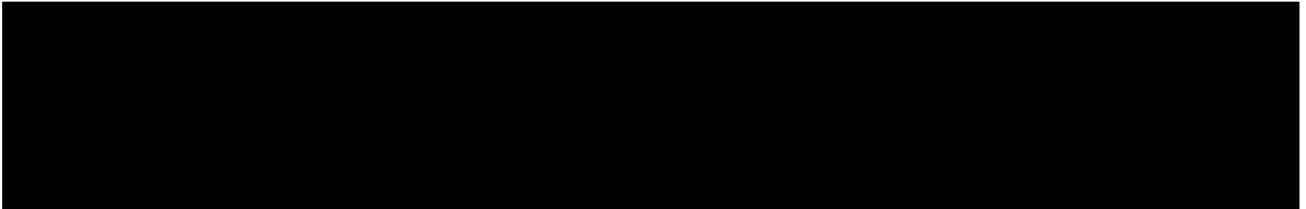
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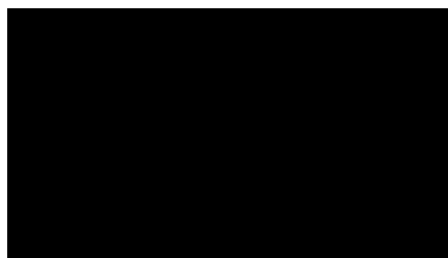
9 BROWN STREET, PORTARLINGTON

Acoustic Report for Endorsement

For



DOC. REF: V2202-01-P ACOUSTIC REPORT (R1)
1 MAY 2026





Project 9 Brown Street, Portarlington
Subject Acoustic Report for Endorsement
Client [REDACTED]
Document Reference V2202-01-P Acoustic Report (r1)
Date of Issue 1 May 2026

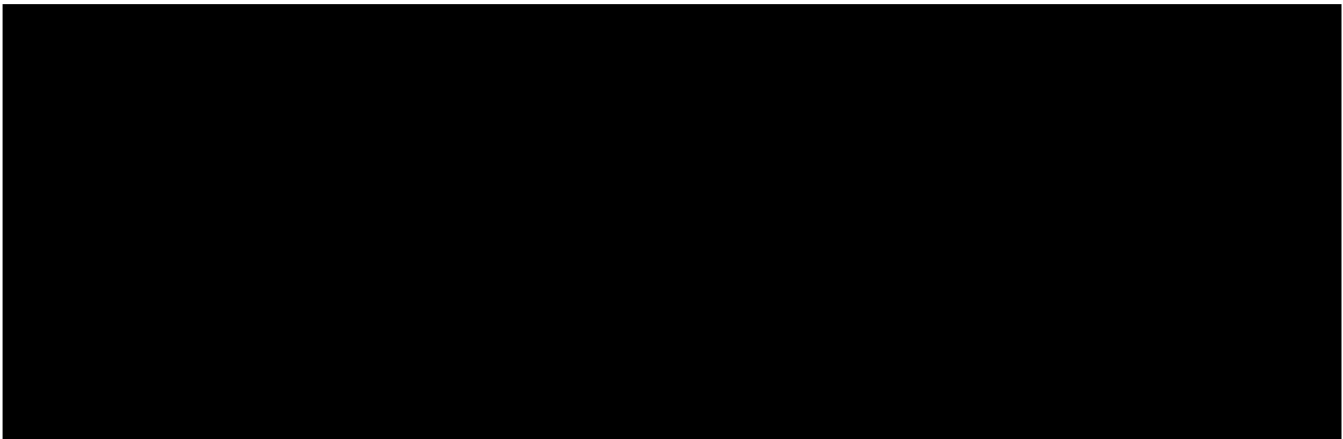




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1 Introduction

[REDACTED] has been engaged by [REDACTED] Architects to assess potential noise impacts relating to the permitted mixed-use development at 9 Brown Street, Portarlington (Subject Land).

This report has been written in response to Condition 4 of Planning Permit No. PP-305-2023, dated 16 July 2024, as follows:

4. Prior to the commencement of the development, an acoustic report to the satisfaction of the Responsible Authority and prepared by a suitably qualified person must be submitted to the Responsible Authority. The acoustic report must demonstrate how the proposal will comply with relevant noise legislation and mitigate amenity impacts on nearby residences/to residences of this development having regard to:
 - a) Roof plant and equipment (noting that all heating and cooling of the building will occur from plant on the rooftop).
 - b) The swimming pool related equipment and filters etc.
 - c) Bin chute through all floors.
 - d) Elevator shaft next to bedrooms on all floors.
 - e) Internal and external noise associated with the gymnasium.

When approved, the acoustic report will be endorsed to form part of the planning permit.

It is noted that following the submission of the amended plans prepared by [REDACTED] Architects dated 15 March 2025, several amendments were made to satisfy the requirements of Condition 1 of the planning permit. Notably, the gymnasium was removed and as such, an assessment of internal and external noise associated with the gymnasium in accordance with Condition 4(e) is no longer required.

Our assessment is based on Plans prepared by [REDACTED] dated 11 December 2025.

Response to Council Comments

Since the submission of the previous version of the acoustic report dated 17 December 2025, Council has provided the following comments:

"Environmental Health has reviewed the report and notes that it does not include specific details regarding the type of rooftop plant (e.g. pool plant, bin chute, air conditioning units, etc.) proposed for the development. Council requires the report to be amended to specifically address these elements, in accordance with Condition 4 of PP-305-2023.

A variation to Standard D16 is sought due to the revised apartment layouts, specifically in relation to services being located adjacent to bedrooms. This matter is also required to be addressed within the acoustic report."

This version of the acoustic report has been revised in response to the above comments.

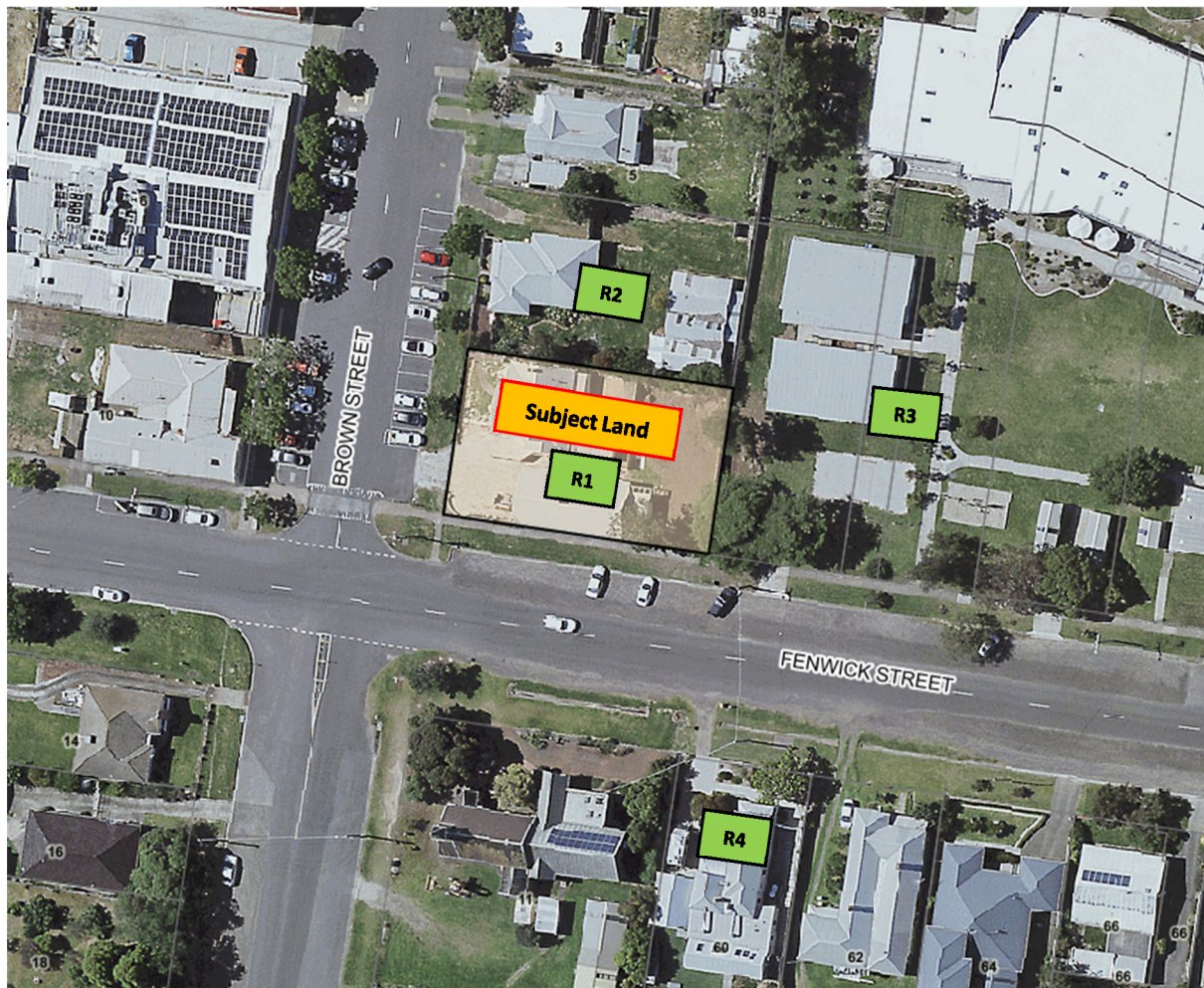


2 Site Context

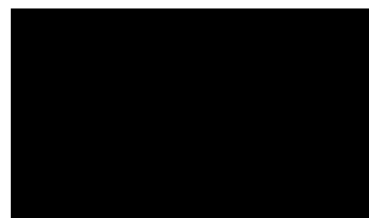
Nearby sensitive uses to the Subject Land were identified as follows:

Tag	Location of Sensitive Use	Direction	Type
R1	9 Brown Street	-	Subject Land apartments
R2	7 Brown Street	North	Dwelling
R3	100 Newcombe Street	East	Pearlington Primary School
R4	60 Fenwick Street	South	Dwelling

Refer to the site map below for locations of nearby sensitive uses and monitoring conducted.



Given that the above dwellings identified are the closest to the Subject Land, it is intrinsic that compliance at these locations would also result in compliance at all other sensitive uses proximate to the Subject Land.



3 Assessment

3.1 Condition 4(a) and 4(b) – Roof and Pool Plant and Equipment

Base Build Mechanical Plant

Noise from any mechanical plant on the Subject Land must comply with the *Environment Protection Regulations 2021* (Regulations) and *Publication 1826: Noise Limit and Assessment Protocol for the Control of Noise from Commercial, Industrial and Trade Premises and Entertainment Venues* (Noise Protocol) when measured:

- Within dwellings (on-site)
- At surrounding off-site dwellings

Individual domestic air-conditioning (AC) units are not assessed under the Noise Protocol.

The methodology for determining the applicable noise limits under the Noise Protocol is dependent on several factors, in particular, whether a sensitive use is located within a Major Urban Area (MUA).

Given that all identified sensitive uses are located outside the MUA boundary, the applicable limits have been derived in accordance with Table B.1 of the Noise Protocol (based on land use zoning), as follows:

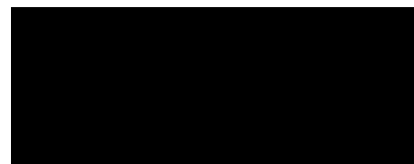
Receivers R1 and R2

Period	Zone Level / Noise Limit <i>C1Z to C1Z</i>
'Day' Period 7am to 6pm (Monday to Saturday)	50 dB(A)
'Evening' Period 6pm to 10pm (Monday to Saturday) 7am to 10pm (Sunday)	45 dB(A)
'Night' Period 10pm to 7am (All Days)	40 dB(A)

Receivers R3 and R4

Period	Zone Level / Noise Limit <i>C1Z to RGZ</i>
'Day' Period 7am to 6pm (Monday to Saturday)	48 dB(A)
'Evening' Period 6pm to 10pm (Monday to Saturday) 7am to 10pm (Sunday)	43 dB(A)
'Night' Period 10pm to 7am (All Days)	38 dB(A)

The Noise Protocol considers 30-minute average energy noise emissions, meaning that the relevant assessment metric being considered is $L_{Aeq-30min}$, dB(A).



The referenced Plans show areas designated for mechanical plant on the rooftop, however, this is typically assessed during detailed design or construction phases of the development once all requirements and specifications are known. Based on our review of the development, building mechanical plant for the development is likely moderate in size and scale, including HVAC equipment, minor mechanical plant for the retail tenancies (e.g., exhaust fans and HVAC), and pool equipment.

Given that specifications for the rooftop and pool mechanical plant are not available at this stage, our office has conducted a sensitivity analysis to determine the maximum allowable noise level that would result in compliance with the Noise Protocol. Spectrum data from past measurements of mechanical plant at uses of similar scale and character have been used to assist the sensitivity analysis.

Our sensitivity analysis suggests that a cumulative sound power level of approximately **81dB(A) $L_{eq30min}$** could potentially be supported within the open portion of the rooftop plant area without any specific mitigation or controls. For context, mixed-use rooftop mechanical plant in multi-storey buildings typically range between 65dB(A) to 80dB(A).

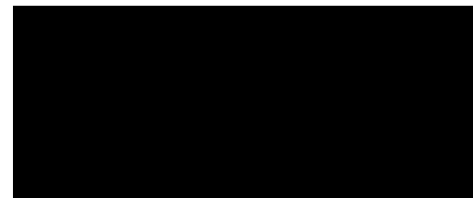
It is noted that our sensitivity analysis is only to predict the levels of mechanical plant and equipment can be supported without requiring specific mitigation. Mechanical plant and equipment with higher levels of noise emissions could also be supported, where specific acoustic mitigation and/or controls are adopted (e.g., screening, attenuators, etc).

Generally, our view is that noise from mechanical plant and equipment presents a low risk in terms of adverse noise impacts, for the following reasons:

- Mechanical plant and/or equipment that is located on the rooftop can be effectively screened to dwellings sited lower than the rooftop of the building
- Mechanical plant that is located internally, within a services room, would be appreciably mitigated by regular forms of building construction
- Use of mechanical plant associated with the retail uses will likely be confined to less sensitive day and evening hours
- Pool pumps can be easily attenuated via enclosures if required
- There are sufficient opportunities to mitigate mechanical plant noise, as follows:
 - Installation of duct attenuators
 - Localised plant screening
 - Selection of quieter equipment
 - Effective positioning of equipment

Appropriately, specific assessments can be carried out during later stages once mechanical plant and equipment specifications are known to determine the extents of mitigation to be provided (if required).

Overall, we are satisfied that noise emissions from mechanical plant and equipment can be mitigated to comply with the Noise Protocol, noting that compliance is mandatory and is enforceable by the EPA, regardless of planning controls.



Domestic Air Conditioning

All outdoor air-conditioning (AC) units will need to be installed and used in compliance with the Environment Protection Regulations 2021 (Regulations), which prohibits the use of such equipment at night if it is audible within an adjoining residence.

The Plans indicate that domestic ACs will be installed on the roof of the development. This is considered typical for multi-storey mixed-use development and is accepted as standard practice.

In reality, AC units are sometimes used during the night period but rarely result in noise complaints. Under the Regulations, an objective assessment is not typically required in planning because all AC units emit similar types of noise and rely on prohibited use at night in the event of a noise complaint.

Overall, the risk of adverse noise impacts from domestic air condensers is low, especially in this context given that condensers installed on the rooftop will have limited line-of-sight and exposure to both on-site and off-site dwellings. If deemed required during later design stages, acoustic screening can be specified for the rooftop to minimise noise impacts from rooftop AC units.

Regardless, all domestic plant use is controlled by the Environment Protection Regulations 2021, which is enforceable regardless of planning controls.

Response to Council Comments

Council has requested further detail regarding the type of rooftop plant proposed. As outlined in the section above, specific details relating to rooftop mechanical plant (including type, quantity, and locations) are not known at this stage. These elements are typically determined during the detailed design and construction phases, once all operational and engineering requirements have been finalised.

Notwithstanding the above, a sensitivity analysis of cumulative noise emissions from potential rooftop plant has been conducted. This analysis is based on representative spectrum data from previously measured rooftop mechanical plant, including exhaust fans, HVAC systems, and pumps.

Based on this assessment, we are satisfied that there is a low risk of unreasonable noise impacts associated with future rooftop plant, for the following reasons:

- The sensitivity analysis establishes a maximum allowable sound power level, which can be adopted as a design criterion for the selection of future plant.
- There are sufficient and practical opportunities to mitigate and attenuate noise from rooftop mechanical plant (e.g. screening, enclosure, selection of low-noise equipment), as outlined in the section above.
- A detailed acoustic assessment can be undertaken at a later stage, once plant specifications are confirmed, to ensure compliance with the relevant Noise Protocol.

On this basis, we consider the current assessment appropriate at this stage of development for satisfying Condition 4a and 4b of the planning permit.



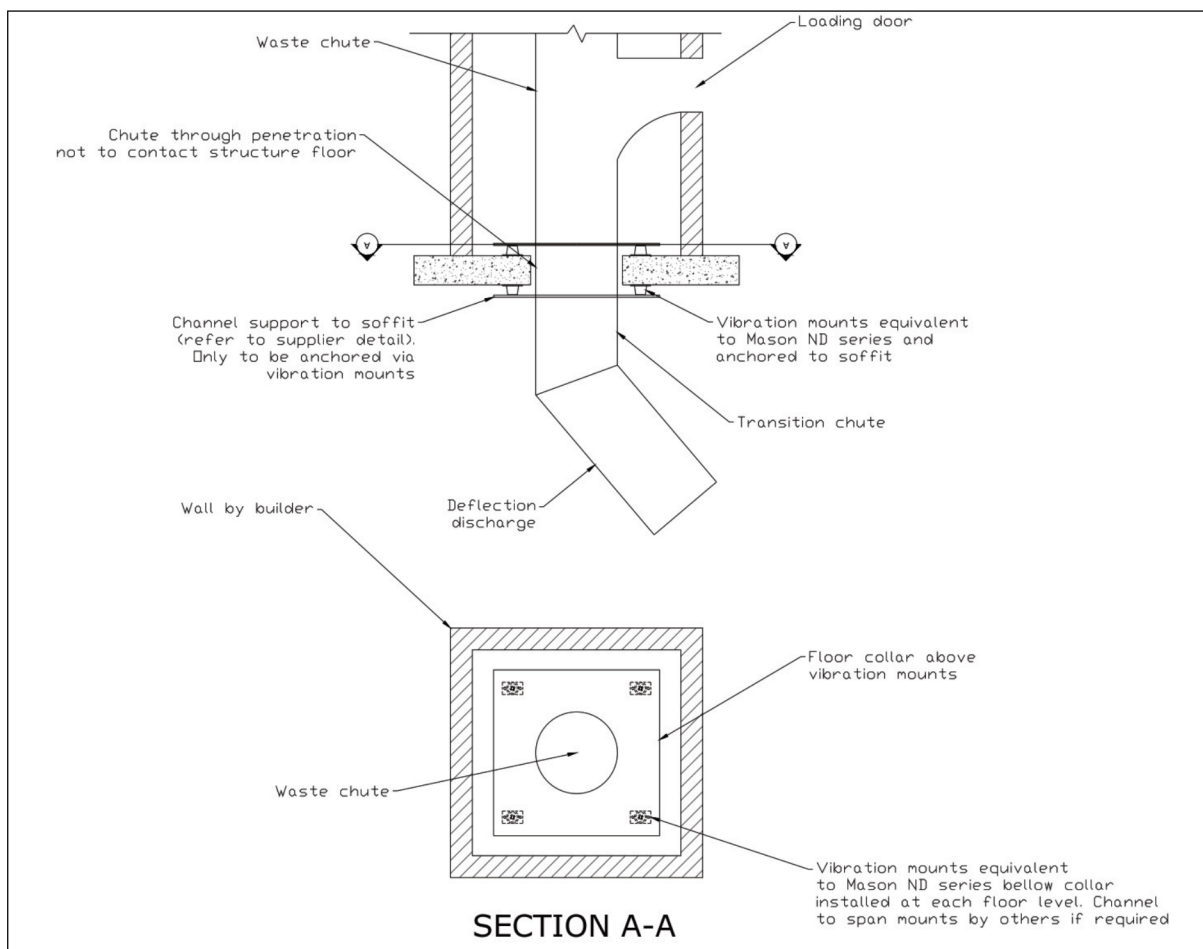
3.2 Condition 4(c) – Bin Chutes

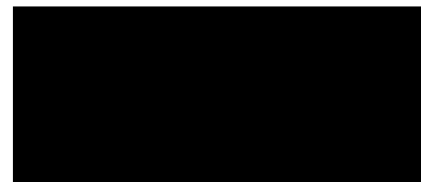
The Plans do not indicate the location of bin chutes, however, this is not typically a planning concern, noting that noise from bin chutes is something that is inherently addressed under the *National Construction Code* (NCC) and the developers own quality requirements. In effect, this is typically a design issue that will be undertaken by the developer at later stages of design.

Regardless, to mitigate the risk of adverse structure-borne noise impacts from the use of the bin chute (if proposed), the developer can consider the following isolation requirements (in addition to complying with the NCC):

- Steel chutes can be acoustically lagged with Pyrotek Soundlag or equivalent. Plastic chutes do not require lagging.
- Slab connections can be installed on rubber outriggers, equivalent to Mason ND mounts
- Avoiding chute anchoring to walls (e.g. only anchored on slab level)
- Where chutes require a deflector at the bottom, it could be isolated via ND mounts, or equivalent (e.g. not anchored directly to soffit)

An example of an isolated typical bin chute detail is shown below:





Because there is no statutory noise requirement for bin chutes (apart from NCC partition requirements), the adoption of the above isolation requirements is at the discretion of the developer.

In effect, we assess that Condition 4(c) is inherently satisfied via building design and compliance with the NCC.

3.3 Condition 4(d) – Elevator Shaft

With regards to noise from the elevator shaft, this is also inherently resolved via compliance with the NCC, which recommends that the elevator shafts are constructed with discontinuous construction and achieve a sound insulation rating of $\geq R_w 50$. This is also not a planning issue, but rather an NCC compliance and development quality matter that is typically resolved in detailed design.

The configuration shown on the plans is a common occurrence in multi-storey mixed-use developments, noting that the elevator shaft is not directly adjacent to any bedrooms, therefore reducing the potential of adverse noise impacts to noise-sensitive spaces (elevator shafts are next to walk-in wardrobes).

There is also inherently a low risk of noise impacts, given that the elevator only services 10 apartments, meaning that the use is expected to be infrequent.

Ultimately, we assess that Condition 4(c) is inherently satisfied via building design and compliance with the NCC.

3.4 Response to Council Comments – Variation to Standard D16

Council has also advised that a variation to Standard D16 is sought due to the revised apartment layouts, specifically in relation to services being located adjacent to bedrooms.

Standard D16 requires the following:

Noise sources, such as mechanical plants should not be located near bedrooms of immediately adjacent existing dwellings.

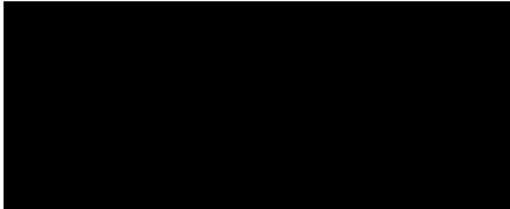
The layout of new dwellings and buildings should minimise noise transmission within the site.

Noise sensitive rooms (such as living areas and bedrooms) should be located to avoid noise impacts from mechanical plants, lifts, building services, non-residential uses, car parking, communal areas and other dwellings.

New dwellings should be designed and constructed to include acoustic attenuation measures to reduce noise levels from off-site noise sources.

It is understood that the revised layouts are not materially different from those previously considered by VCAT, particularly in relation to service cupboards being located adjacent to bedrooms.

In this context, service cupboards do not present a material risk of adverse noise impacts, given their typical use and commonly being located next to habitable rooms in large apartment developments. Service cupboards generally do not enclose noisy mechanical equipment and are



instead used to house utility services and communications, which do not generate material noise emissions.

Regardless, any potential noise from the services cupboards is inherently resolved via building design and compliance with the NCC.

On this basis, the proposed arrangement is not expected to result in adverse acoustic impacts and is considered acceptable in the context of Standard D16, noting that any residual noise impacts are inherently mitigated via requirements in the NCC.

While considered best-practice, it would otherwise be impractical to locate sensitive spaces away from all types of noise sources identified in Standard D16 in a multi-storey residential development.

4 Recommendations and Conclusion



has assessed potential noise impacts from the permitted mixed-use development at 9 Brown Street, Portarlington in response to Condition 4 of the planning permit.

Our sensitivity analysis indicates that a reasonable level of mechanical plant noise emissions can be supported within the development. To this end, we consider the risk of unreasonable noise impacts from mechanical plant to be low, noting that there is sufficient opportunity for noise mitigation (if deemed required). Appropriately, it is recommended that rooftop mechanical plant and equipment be assessed to comply with the noise limits in this report at later stages of development, once all requirements are known.

Noise impacts from the bin chutes (if proposed), elevator shafts and services cupboards are inherently resolved via building design and compliance with the NCC.

To further minimise noise impacts from bin chutes, the developer can choose to adopt the isolation requirements shown in Section 3.2.

To this end, we are satisfied that the Condition 1 plans can be endorsed by Council without further amendments to the plans.