

Acoustic Assessment and Mitigation

To satisfy below condition

- x. ***The development hereby permitted shall not commence until a scheme for protecting the proposed dwellings from noise from the adjacent commercial/industrial premises has been submitted to and approved by the Local Planning Authority. All works which form part of the scheme shall be completed before any of the permitted dwellings are first occupied.***

Reason: To ensure that the development does not cause unacceptable levels of noise and disturbance to neighbouring dwellings in accordance with Policy DM10 of the Site Allocations and Development Management Policies Development Plan Document (2016).

The proposed development comprises the conversion of an existing building into residential dwellings. The site is located adjacent to Upper Bond Street, which experiences moderate traffic flows during daytime periods, with significantly reduced activity during the evening and night. There are no known late-night commercial or entertainment uses in the immediate vicinity that would give rise to significant noise disturbance.

Notwithstanding this, a precautionary approach has been adopted to ensure that the proposed dwellings achieve acceptable internal noise levels in accordance with Policy DM10 and relevant guidance, including BS8233:2014 (Guidance on sound insulation and noise reduction for buildings).

Design Approach

The scheme benefits from the existing substantial building fabric, comprising approximately 1.5 brick thick masonry walls, which provide a high level of mass and density. This form of construction is expected to deliver a significant level of sound attenuation (circa 45–50 dB reduction), forming a robust baseline for acoustic performance.

External Noise Sources

The primary external noise source is road traffic along Upper Bond Street. Given the urban context, this is considered typical and not excessive. Noise levels are expected to reduce materially during night-time hours, supporting acceptable residential amenity.

Internal Noise Targets

The development is designed to achieve internal noise levels consistent with BS8233:2014, namely:

- ≤35 dB LAeq (daytime) within living rooms

- ≤ 30 dB LAeq (night-time) within bedrooms

These targets align with good practice for residential environments.

Mitigation Measures

Windows:

- Installation of acoustic double-glazed units (4/20/4 argon-filled)
- Performance specification: $R_w(C_{tr})$ 31 (-6) dB or better
- These units will provide enhanced attenuation of traffic noise, particularly at lower frequencies

Enhanced Glazing to Ground Floor (High Exposure Areas):

As an additional precautionary measure, the ground floor apartments located immediately adjacent to Neales Yard, Druid Street and Upper Bond Street will be fitted with enhanced acoustic glazing.

- Laminated acoustic double glazing (6.8mm / 20mm / 4mm configuration)
- Provides improved attenuation, particularly for low-frequency traffic noise
- Represents an additional level of protection for the most exposed elevations

Ventilation:

To allow adequate ventilation without compromising acoustic performance:

- Apartments facing Upper Bond Street and Neales Yard:
 - Acoustic trickle ventilators achieving $D_{n,e,w}(C_{tr}) \geq 37(-3)$ dB
- Other elevations:
 - Standard trickle ventilators achieving $D_{n,e,w}(C_{tr}) \geq 33(-1)$ dB

This ensures windows can remain closed where necessary to maintain internal noise standards.

Internal Acoustic Separation

The development will be constructed to comply with the relevant requirements of Building Regulations Approved Document E in respect of sound insulation between dwellings.

Please refer to the attached section drawings, which demonstrate the proposed acoustic construction detailing between dwellings, including both lateral and vertical separation, in accordance with Building Regulations requirements.

Conclusion

The combination of:

- substantial existing building fabric,
- enhanced acoustic glazing (including upgraded ground floor specification),
and
- appropriately specified ventilation systems

will ensure that the proposed dwellings achieve acceptable internal noise environments in accordance with Policy DM10 and BS8233:2014.

All measures outlined above will be implemented prior to first occupation of the dwellings, in accordance with the requirements of the planning condition.