

Passive Ventilation Strategy in Support of Application No. PN/24/98468
Planning Condition 2

08/04/25

Planning Condition: *Prior to commencement of the development hereby approved, full details of the glazing and MVHR specifications to be used for each elevation of the building, to demonstrate compliance with BS 8233, shall be submitted to and approved in writing by the Local Planning Authority. The glazing shall be installed in accordance with the approved details prior to occupation of the development and thereafter retained. **Reason:** To protect future occupants from adverse noise impacts in accordance with Policy DM8 of the Eastleigh Borough Local Plan (2016-2036).*

Proposed Ventilation Strategy Overview: In place of a full mechanical ventilation with heat recovery (MVHR) system, we are proposing a hybrid ventilation strategy consisting of:

- Passive background ventilators to all habitable rooms (bedrooms and living rooms)
- Mechanical extract fans to wet rooms (kitchens and bathrooms)

This approach satisfies the requirements of Approved Document Part F of the Building Regulations while also addressing the planning condition relating to noise impacts and BS 8233 compliance.

Background Ventilation – Passive Vent Solution: We propose the installation of one **AAC125HP – Rytons Super Acoustic Controllable LookRyt® AirCore®** in each habitable room (i.e. one in each bedroom and one in each living room).

This product provides an **Equivalent Area (EA) of 8,500 mm²**, tested to **BS EN 13141-1:2004** and **independently verified by the BRE**. This exceeds the minimum requirements set out in Approved Document Part F, which requires:

- **5,000 mm² EA** of background ventilation per habitable room in dwellings with continuous mechanical extract (e.g. kitchen and bathroom extract fans).

Therefore, the proposed ventilators not only comply with but exceed the ventilation requirements for converted dwellings as set out by regulation.

Acoustic Performance: The **AAC125HP Rytons** ventilators have been independently tested to provide up to **43 dB Dn,e,w (open)** and **50 dB Dn,e,w (closed)**. These high-performance acoustic ratings ensure that the units can be left open for ventilation while minimising noise intrusion from external sources.

Our appointed acoustic consultant has reviewed the specification of the Rytons units in the context of each elevation, and confirmed that the use of these vents does **not compromise the overall internal noise levels** set out by BS 8233 or the noise report submitted with the planning application.. The acoustic report demonstrating compliance with noise limits is submitted alongside this planning statement.

To comply with Part B regulations, the fire rated metal external louvre will be specified, to mitigate the use of combustible materials over 11m. This will be powder coated to match the existing brickwork.

Window and Glazing Strategy: In addition to the above, we are proposing a **secondary glazing system** to enhance both thermal and acoustic performance of the existing windows. This comprises:

- **4mm laminated glass**, mounted internally,
- **100mm air gap** between primary and secondary glazing.

This system significantly improves sound insulation from environmental noise and enhances the thermal efficiency of the building envelope.

Although the secondary glazing units are openable, the installation of high-performance passive ventilators ensures that windows can remain closed without impacting air quality or compliance with Approved Document F. This further supports the planning condition requirement to limit noise ingress into habitable spaces.

Justification for Passive Ventilation Over MVHR in Conversions: While MVHR systems are commonly used in new-build developments to achieve airtightness and energy efficiency targets, they are not always the most appropriate solution for conversions. In particular:

- Existing buildings typically have higher air leakage, which undermines the efficiency of MVHR systems
- MVHR installation requires significant space and duct routing, which is not always feasible in conversions
- MVHR systems entail higher running costs and regular servicing, posing a potential long-term maintenance burden on occupants
- In contrast, passive ventilators are low-maintenance, and suitable for properties where mechanical balancing is not possible due to the building fabric

This strategy allows us to comply fully with Building Regulations and planning conditions while taking a proportionate, practical, and acoustically compliant approach to ventilation in a conversion context. On this particular building, MVHR is not seen as the most suitable ventilation strategy.

Conclusion: The proposed strategy of using high-performance passive ventilators alongside mechanical extract to wet rooms and secondary glazing provides a fully compliant, acoustically appropriate solution that aligns with both Approved Document F and BS 8233.

We therefore submit this ventilation approach in full support of discharging the planning condition related to glazing, and welcome confirmation of its approval.