

Noise Mitigation & Acoustic Strategy

212–218 London Road, Waterloooville

Planning Ref: APP/25/01015

Condition 14 & 15 Discharge Submission

MAY 2026

1. Introduction

This document has been prepared to support the discharge of Conditions 14 and 15 of planning permission APP/25/01015.

The proposed development comprises the retention of ground floor commercial floorspace (Class E), with new residential accommodation above including self-contained flats and shared living accommodation (HMO).

This report sets out the acoustic design strategy to ensure that the development achieves appropriate internal noise levels and sound insulation performance in accordance with BS8233:2014 and Approved Document E.

2. Design Criteria

The development has been designed to achieve the following internal noise standards:

- Bedrooms (night-time): 30 dB LAeq,8hr
- Living rooms (daytime): 35 dB LAeq,16hr
- Maximum internal noise levels (bedrooms): 45 dB LAm_{ax}

These criteria are consistent with BS8233:2014 and Environmental Health requirements.

3. Acoustic Design Strategy

The acoustic strategy has been developed in response to the Noise Impact Assessment prepared by Vine Acoustics and reflects the site's exposure to road traffic noise along London Road.

A coordinated façade and ventilation approach has been adopted to ensure that internal noise levels are achieved.

The strategy comprises:

- Enhanced acoustic glazing
- Acoustic trickle ventilators
- Mechanical ventilation (MVHR) to noise-sensitive elevations

This ensures that habitable rooms can be adequately ventilated without reliance on openable windows where external noise levels are elevated.

The proposed strategy represents a robust and proven approach consistent with comparable schemes along London Road, including previously approved developments.

4. Glazing Specification

All habitable rooms will be fitted with a consistent specification of acoustic double-glazed window units across the development.

The glazing will achieve a minimum sound reduction performance of:

- Rw 37 dB

This specification has been selected based on the worst-case façade condition fronting London Road and will be applied to all elevations to ensure a robust and consistent approach to noise mitigation.

Suitable systems include:

- Smart Systems Alitherm 400 / 600
- Reynaers CS77
- Senior Architectural Systems SPW600

or similar approved aluminium window systems.

The glazing performance ensures that internal noise levels will be achieved in accordance with BS8233:2014 when windows are closed.

Final glazing build-ups and manufacturer specifications will be confirmed at Building Regulations stage.

5. Acoustic Ventilation (Trickle Vents)

All habitable rooms will be provided with acoustic trickle ventilators to provide background ventilation.

The ventilators will achieve a minimum acoustic attenuation performance of:

- 36–38 dB Dn,e,w

Proprietary systems such as the R.W. Simon acoustic ventilator range (or similar approved) will be used.

These systems are compliant with Approved Documents F and E and provide controlled background ventilation whilst maintaining façade acoustic performance.

6. Mechanical Ventilation Strategy (MVHR)

To elevations fronting London Road, habitable rooms will not rely on openable windows for purge ventilation due to elevated external noise levels.

Mechanical Ventilation with Heat Recovery (MVHR) systems will be installed to serve these rooms.

The MVHR system will provide:

- Continuous background ventilation
- Purge / boost capability
- Balanced supply and extract air

This allows windows to remain closed where necessary to control noise ingress, whilst maintaining compliance with Approved Document F and Approved Document O.

The MVHR system layout and design are included within the submitted mechanical drawings (Appendix A).

7. Separating Floor and Ceiling Construction (Condition 15)

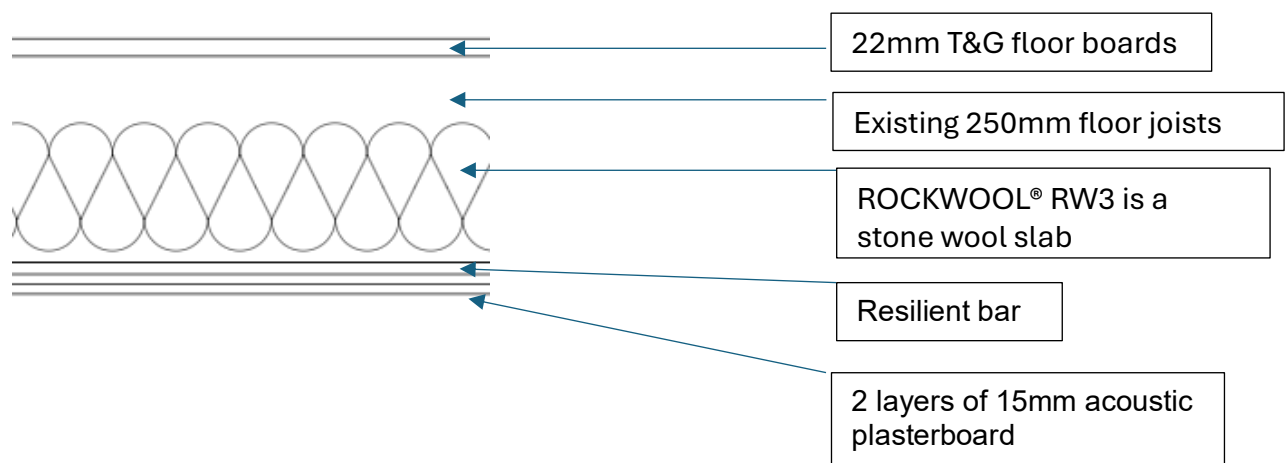
The separating floor/ceiling construction between the retained ground floor commercial unit and the first floor residential accommodation will be designed and installed to achieve a minimum airborne sound insulation performance of:

- $\geq 48 \text{ dB DnT,w} + \text{Ctr}$

This is at least 5 dB above the minimum performance standard set out within Approved Document E for separating floors.

The proposed construction will comprise:

- Existing / new structural floor joists to Structural Engineer's design
- Minimum 100mm acoustic mineral wool insulation between joists (minimum 45kg/m³ density)
- Resilient bar system fixed to underside of joists
- 2 layers of 15mm acoustic plasterboard fixed to resilient bars
- All board joints staggered and sealed
- All perimeter junctions sealed with acoustic mastic
- Floor finish above to include appropriate acoustic floor treatment / underlay where required



This build-up follows a robust acoustic design approach based on mass, absorption and resilient separation.

The final product specification and manufacturer's acoustic test data will be confirmed as part of the Building Regulations technical design and prior to installation.

The approved sound insulation measures will be fully installed prior to occupation of the residential units and retained thereafter for the lifetime of the development.

8. Compliance Statement

The proposed acoustic strategy demonstrates that the development will achieve the required internal noise standards in accordance with BS8233:2014.

The combination of:

- Acoustic glazing (Rw 37 dB)
- Acoustic ventilation (36–38 dB Dn,e,w)
- Mechanical ventilation (MVHR)

ensures that habitable rooms can be adequately ventilated while maintaining acceptable internal noise levels.

This approach is consistent with ProPG guidance and reflects established and previously approved mitigation strategies for similar developments along London Road.

9. Conclusion

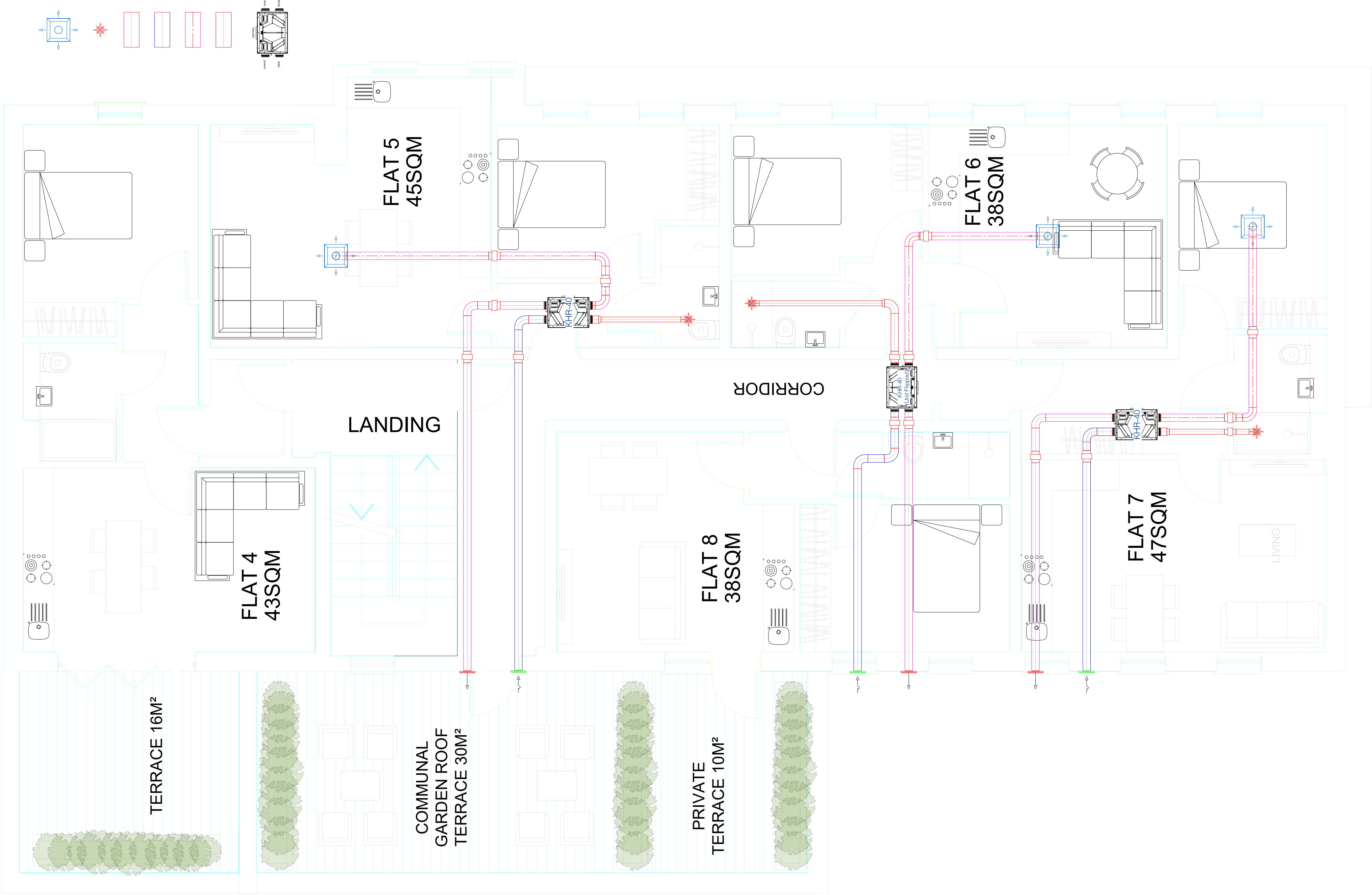
Based on the above, the proposed development will achieve the required internal noise standards and appropriate sound insulation performance.

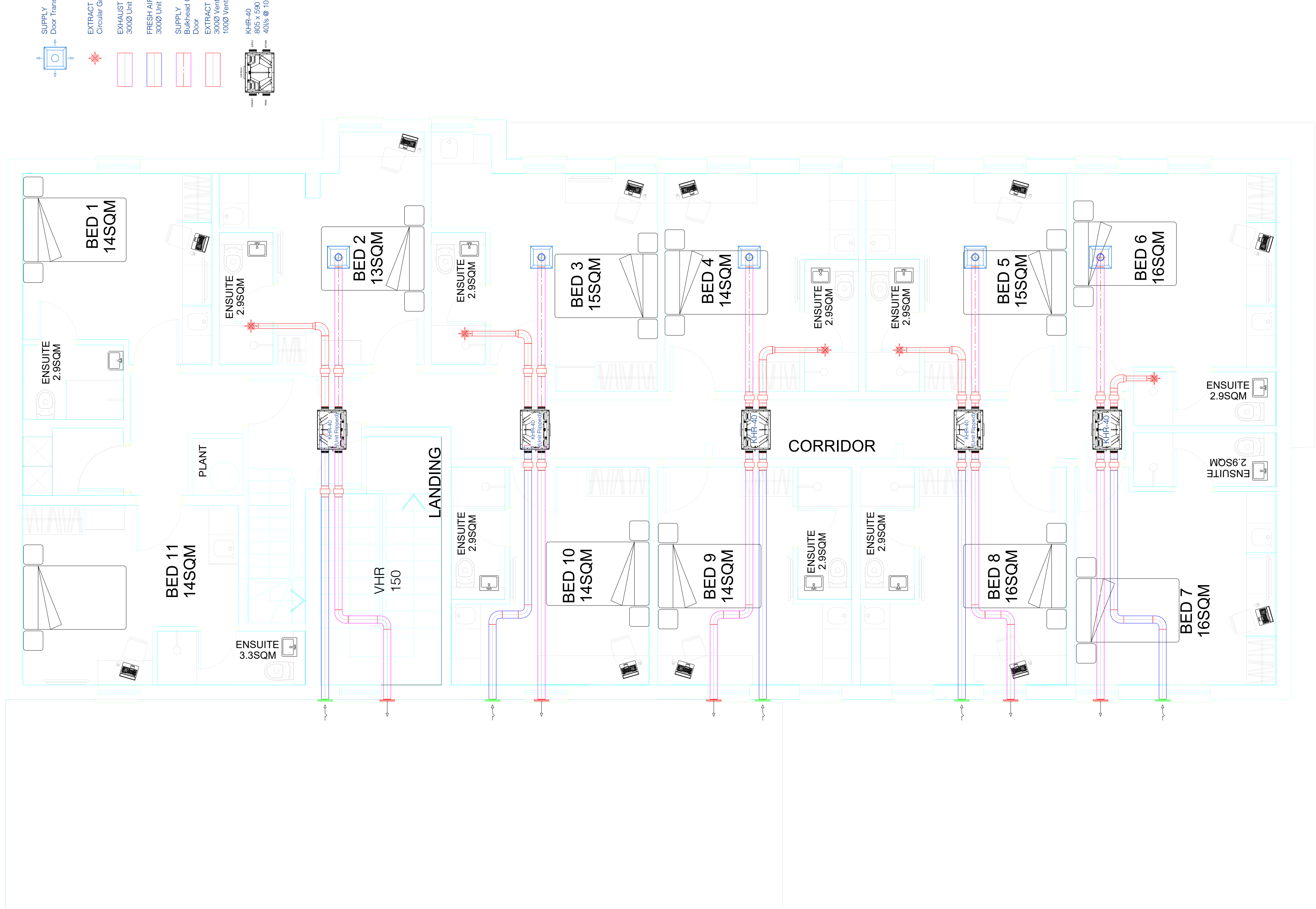
The submitted information is therefore considered to satisfy the requirements of Conditions 14 and 15 of planning permission APP/25/01015.

Appendices

Appendix A

MVHR Layout / Mechanical Drawings





Appendix B

Acoustic Ventilation Datasheet

Simon Acoustic Ventilators

The Simon Acoustic ventilator range is designed to assist in creating aesthetic solutions for all acoustic requirements. All ventilators in our range meet the requirements of Approved Document F & Approved Document E of the Building Regulations.



FEATURES

- » Sound reduction up to 42db open
- » All models have been tested in accordance with BS EN ISO 717-1:1997 & BS EN 20140-10:1992
- » All models have a minimum Equivalent Area of 2500mm²
- » Meets WHO recommended reduction of 33db

OPTIONS

- » Can be supplied on Glazed-in carrier bar » Some models available with humidity control

Model Details	Internal Colour options	External Colour options
Simon Acoustic FV	Any Standard Simon FV colour	Any Standard RAL or Silver anodised
Simon Acoustic SL	Any Standard RAL or Silver anodised	Any Standard RAL or Silver anodised
Simon Acoustic EMM	Any Standard RAL	Any Standard RAL or Silver anodised
Simon Acoustic EHA	Any Standard RAL	Any Standard RAL or Silver anodised
Simon Acoustic EHAS	Any Standard RAL	Any Standard RAL or Silver anodised
Simon EHA & AEA851	Any Standard RAL	Any Standard RAL
Simon EHAS & AEA851	Any Standard RAL	Any Standard RAL

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Simon Acoustic Ventilators

Model Details	dB closed	dB Open	EA to BS13141-1	Measured Area	Internal Dimension	External Dimension	Slot Size
Acoustic FV	40	32	2830	4080	400x20	431 x 45	340x12
Acoustic SL	39	33	2967	4080	400x18	431 x 45	340x12
Acoustic EMM	39	33	3199	4080	404x31	431 x 45	340x12
Acoustic EHA	38	36	2799	4080	423x54	431 x 45	340x12
Acoustic EHAS	41	38	2799	4080	423x54	431 x 45	340x12
EHA & AEA851	-	41	3912	3925	423x54	420x54	2x (177x12) (10mm land)
EHAS & AEA851	-	42	3912	3925	423x54	420x54	2x (177x12) (10mm land)

ACOUSTIC FV

- » Supplied with PVCu internal flap unit and aluminium external canopy
- » Rod control option available

ACOUSTIC SL

- » Manufactured full from aluminium
- » Rod control option available

ACOUSTIC EMM

- » Supplied with PVCu internal unit and aluminium external canopy
- » Uses a hygromatic sensor to open and close dependent on the quantity of moisture in the room

ACOUSTIC EHA

- » Supplied with PVCu internal unit and aluminium external canopy

ACOUSTIC EHAS

- » Supplied with PVCu internal unit and aluminium external canopy
- » Includes additional acoustic sleeve to increase acoustic properties

SIMON EHA & AEA851

- » Supplied with PVCu internal unit and external canopy

SIMON EHAS & AEA851

- » Supplied with PVCu internal unit and external canopy
- » Includes additional acoustic sleeve to increase acoustic properties



Appendix C

Window System Reference / Acoustic Glazing Specification