

DISCHARGE OF CONDITIONS 3 AND 4

Noise Mitigation and Ventilation Details

The Kings Veg, 7 King Street, Gravesend, Kent, DA12 2EB

Planning authority	Gravesham Borough Council
Planning reference	20260090
Applicant	Mr Bashir Ali
Agent	Dream Design Develop Ltd
Acoustic report	NOVA Acoustics, NP-013491 Rev 01, dated 8 December 2025
Approved floor plan	Drawing 003A, dated 21 January 2026
Document reference	DDD/20260090/C3-C4/P1
Status / date	P1 - For condition discharge 14 July 2026

SUBMISSION SCOPE

This statement, together with Drawing Package DDD-C34-01 to DDD-C34-06 and the approved NOVA Acoustics report, provides the full proposed design for secondary glazing, sound-insulation upgrades, one MVHR system per flat, internal duct routes and the rear-elevation intake/exhaust terminals. The specified products or demonstrably equal alternatives must be installed exactly as approved.

Prepared to enable written approval before any development commences.

1. Executive summary

Planning permission 20260090 requires the noise mitigation and ventilation details to be approved in writing before development commences. This document fixes the materials, performance criteria, equipment, locations and installation requirements that will be followed for all three studio flats.

The proposal adopts the recommendations of the NOVA Acoustics Residential Noise Assessment and responds to the Conservation Area constraint by retaining the external front windows, installing bespoke secondary glazing internally, and locating all ventilation intake and exhaust terminals on the rear elevation.

IMPORTANT HOLD POINT

No strip-out, partitioning, glazing, acoustic lining, floor build-up, ventilation installation or other development work should commence until the Local Planning Authority has issued written approval of Conditions 3 and 4. Opening-up solely for verification should first be agreed with the case officer if required.

2. Decision notice requirements

2.1 Condition 3 - noise mitigation measures

Requirement: Before development commences, full details of the noise mitigation measures in the NOVA report must be approved. The details must include secondary glazing, mechanical ventilation and sound-insulation measures. The approved measures must be implemented before first occupation and retained thereafter.

2.2 Condition 4 - ventilation systems

Requirement: Before development commences, full details of all ventilation systems, including MVHR, external grilles and ducting, must be approved. The approved details must be implemented before occupation and retained thereafter.

The following compliance matrix identifies where each requirement is addressed.

Condition requirement	Proposed detail	Evidence / drawing
Secondary glazing	Bespoke internal secondary double glazing to all front studio windows; existing external glazing retained.	Sections 4.1-4.2; DDD-C34-03
Mechanical ventilation	One Titon HRV1.6 Q Plus TP409HMB system per flat.	Section 5; DDD-C34-01 and DDD-C34-06
Sound-insulation measures	Independent sports-bar wall lining, floating floor and isolated ceiling build-up, flanking controls.	Sections 4.3-4.5; DDD-C34-04 and DDD-C34-05
External grilles and ducting	Two 125 mm rear terminals per flat; rear-only external route; internal 125 mm ducts.	Sections 5.3-5.5; DDD-C34-01 and DDD-C34-02
Implementation and retention	Competent installers, photographic records, commissioning and maintenance schedule.	Sections 6-8

3. Documents and design basis

- Gravesham Borough Council decision notice for application 20260090.
- NOVA Acoustics Residential Noise Assessment, project NP-013491, Revision 01, dated 8 December 2025.
- Approved Proposed Floor Plans, Drawing 003A, dated 21 January 2026.
- NOVA design criteria: BS 8233:2014 internal noise levels, NR25/NR30 mechanical-services limits, and the report-specific Moorhouse low-frequency criteria.
- Titon HRV1.6 Q Plus product and acoustic data for model TP409HMB, with 125 mm connections, summer bypass and variable airflow.
- The applicable Approved Document F requirements at the Building Regulations submission and commissioning stages.

4. Condition 3 - noise mitigation specification

4.1 Front-facade secondary glazing

All studio living/sleeping spaces face King Street. The existing external windows will be retained and made good. A bespoke secondary glazing system will be installed internally to every front-facing studio window, including the curved/bay openings. The external appearance of the historic windows is unchanged.

Component	Fixed specification
Existing glazing	Existing 4 mm float glass retained, repaired, draught-sealed and made good.
Cavity	Minimum clear 200 mm sealed air cavity between existing glazing and the internal secondary unit.
Secondary unit	6 mm glass / 16 mm argon-filled cavity / 8.8 mm Optiphon laminated glass.
Minimum acoustic performance	Combined system R_w 52 dB and $R_w + C_{tr}$ 46 dB. Octave-band sound reduction not less than 30, 36, 39, 49, 59, 62 and 71 dB at 63, 125, 250, 500, 1k, 2k and 4k Hz respectively.
Frames and seals	Internal aluminium/timber secondary frame; continuous compression seals to openable leaves and continuous non-hardening acoustic sealant at all frame-to-reveal junctions.
Ventilators	No trickle or passive ventilators. Existing ventilator openings, if any, permanently infilled to provide sound reduction equivalent to the adjacent wall/window construction.

SECONDARY GLAZING - ACOUSTIC AND HERITAGE DETAIL



Drawing: DDD-C34-03 Scale: NTS Revision: P1 - For condition discharge

Figure 1. Fixed secondary glazing detail (Drawing DDD-C34-03).

4.2 Manufacturer confirmation and installation

- Before manufacture, the specialist glazing contractor must provide shop drawings for each window type, including the curved bay geometry, opening method, frame dimensions, seals and fixing positions.
- The manufacturer must confirm in writing that the proposed complete system meets or exceeds the specified octave-band performance and $R_w/R_w + C_{tr}$ values. A generic standard secondary glazing system is not acceptable.
- Frames must be independently supported from sound substrate and must not create uncontrolled gaps or flanking paths around the reveals.
- Installation photographs will record the cavity, glass markings, seals and acoustic infill before finishes conceal the work.

4.3 Separating wall adjoining the sports bar

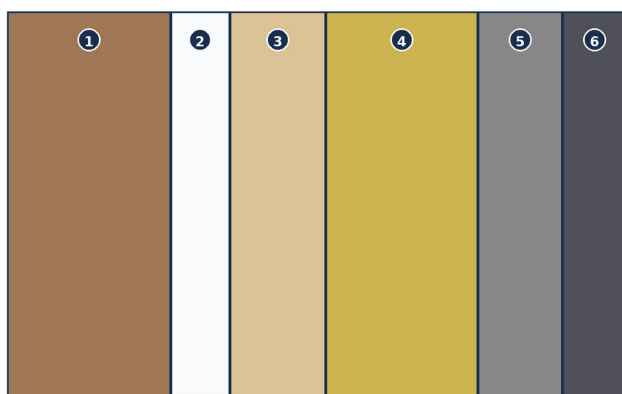
The full wall adjoining the sports bar will receive a fully independent acoustic lining. The build-up from the sports-bar side toward the flat is:

- Existing 250-300 mm masonry wall.
- Minimum 50 mm clear air gap.
- Minimum 90 mm independent timber stud frame, not fixed back to the masonry except where an acoustically isolated proprietary restraint is essential.
- 140 mm full-fill acoustic mineral wool, minimum density 60 kg/m³, such as Rockwool RW3 or equal.
- Two layers of 22 mm cement particle board, each minimum density 1300 kg/m³.
- One layer of 19 mm iKoustic MuteBoard 2 or demonstrably equal acoustic board.
- All board joints staggered; perimeters and penetrations continuously sealed with flexible acoustic mastic.

The design target is 76 dB DnT,w under the NOVA worst-case music-bar/nightclub assessment. Electrical accessories are avoided on the party wall where practicable and are not installed back-to-back.

SEPARATING WALL UPGRADE - SPORTS BAR INTERFACE

Independent acoustic lining to the full extent of the wall adjoining the sports bar.



- | | |
|---|--|
| 1 Existing 250-300 mm masonry wall | 4 140 mm full-fill acoustic mineral wool, minimum 60 kg/m ³ |
| 2 Minimum 50 mm clear air gap | 5 2 x 22 mm cement particle board, minimum 1300 kg/m ³ |
| 3 Independent minimum 90 mm timber stud | 6 19 mm iKoustic MuteBoard 2 or equal |

PERFORMANCE / INSTALLATION

- Design target: 76 dB DnT,w under the NOVA worst-case music-bar model.
- Studwork and boards are fully independent of existing masonry; no rigid bridge is permitted across the 50 mm cavity.
- Board joints staggered. All perimeters, service penetrations and junctions sealed with flexible acoustic mastic.
- Sockets are not back-to-back and are avoided on this wall where practicable.
- Any common joists, beams or steelwork identified during opening-up are independently encased following review by the acoustic consultant.

Drawing: DDD-C34-04 Scale: NTS Revision: P1 - For condition discharge

Figure 2. Separating wall build-up (Drawing DDD-C34-04).

4.4 Separating floor over the ground-floor retail unit

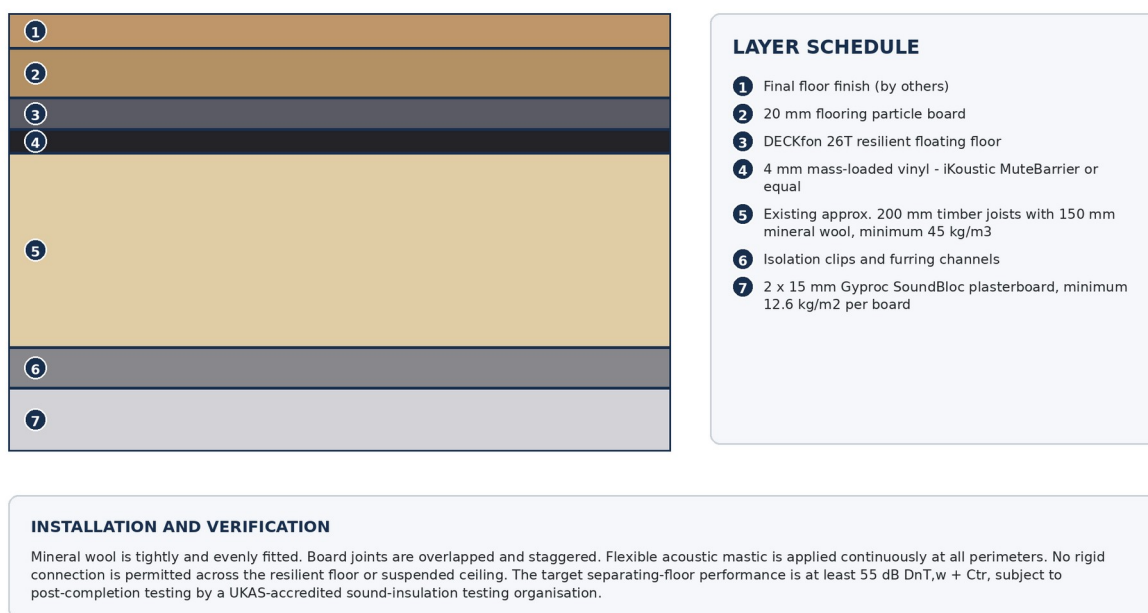
The existing tested floor was below the required standard. The following upgrade will therefore be installed over the ground-floor retail unit, with the floating-floor principle continued through the residential floors where necessary to control re-radiated low-frequency vibration:

- 4 mm mass-loaded vinyl, iKoustic MuteBarrier or equal.
- DECKfon 26T resilient floating-floor layer.
- 20 mm flooring-grade particle board.
- Existing approximately 200 mm timber joists with 150 mm mineral wool slab, minimum density 45 kg/m³, tightly and evenly fitted.
- Isolation clips and furring channels below the joists, such as MuteClip and compatible channels or equal.
- Two layers of 15 mm Gyproc SoundBloc plasterboard, each minimum surface mass 12.6 kg/m², with joints staggered and perimeters sealed.

No rigid fixing, pipe, skirting or partition is permitted to bridge the resilient layers. The required separating-floor target is at least 55 dB DnT,w + Ctr, subject to final testing.

SEPARATING FLOOR AND FLOATING FLOOR UPGRADE

Applied over the ground-floor retail unit; floating floor principle continued through the residential floors to control low-frequency vibration.



Drawing: DDD-C34-05 Scale: NTS Revision: P1 - For condition discharge

Figure 3. Separating floor and floating floor build-up (Drawing DDD-C34-05).

4.5 Flanking and structure-borne noise controls

- Opening-up will identify any common timber joists, beams, steel members or concealed voids linking the sports bar and the flats.
- Any common structural element capable of re-radiating noise will be independently encased or isolated following review by NOVA Acoustics before it is concealed.
- All service penetrations through acoustic constructions will be minimised, sleeved and sealed with a tested acoustic/fire-stopping system.
- Partitions are built off the structural deck or detailed so that floating-floor isolation is not short-circuited.
- The acoustic consultant will be invited to inspect the critical wall and floor build-ups before closure.

5. Condition 4 - ventilation system details

5.1 Selected MVHR equipment

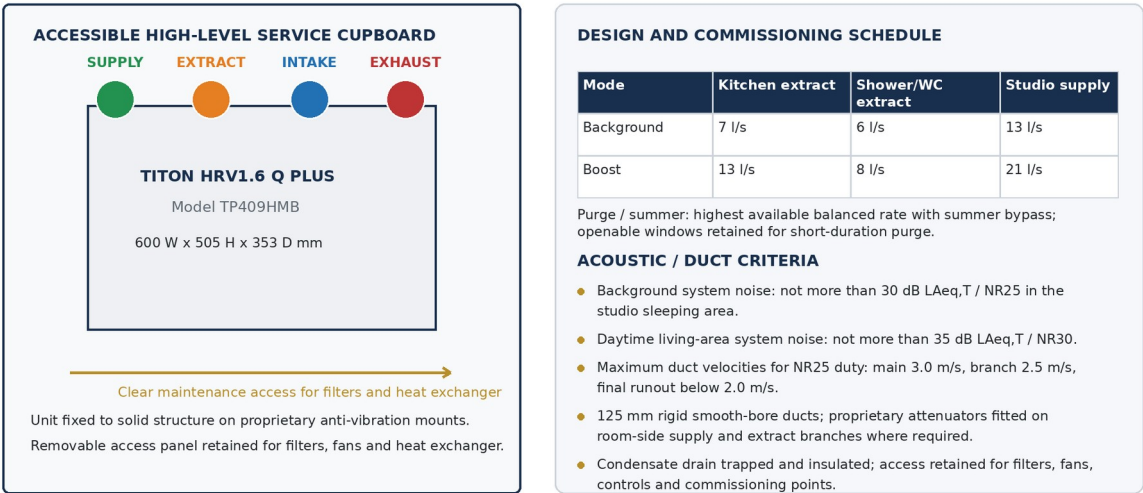
Each flat will be served by a separate Titon HRV1.6 Q Plus HMB mechanical ventilation with heat recovery unit, product code TP409HMB. The unit is selected because it has 125 mm duct connections, variable airflow, automatic summer bypass, internal humidity sensing and sufficient capacity for the background and boost duties of a one-room studio flat.

Manufacturer / model	Titon HRV1.6 Q Plus HMB - TP409HMB
Unit size / weight	600 mm wide x 505 mm high x 353 mm deep (363 mm including mounting bracket); approximately 22 kg.
Connections	Four 125 mm circular connections: dwelling supply, dwelling extract, outside-air intake and exhaust discharge.

Controls	Continuous background mode; local boost from kitchen/shower control and humidity demand; summer bypass; filter-change indication.
Design duty per flat	13 l/s balanced background; 21 l/s balanced boost. Final fan settings to be commissioned against measured terminal flows.
Acoustic basis	At 14 l/s and low resistance, the manufacturer reports casing breakout approximately 8 dB(A) at 3 m. In-duct noise is controlled by low velocities, duct length and room-side attenuators.
Equivalent products	No substitute is permitted unless it has equal or better airflow, casing/duct acoustic data, 125 mm connections, summer bypass and physical dimensions, and is approved in writing before installation.

MVHR UNIT, SERVICE CUPBOARD AND AIRFLOW SCHEDULE

One independent system per studio flat.



Drawing: DDD-C34-06 Scale: NTS Revision: P1 - For condition discharge

Figure 4. Selected MVHR unit, service cupboard and airflow schedule (Drawing DDD-C34-06).

5.2 Internal location and access

- One unit is located at high level within an accessible service cupboard in the rear lobby/service zone of each flat, as shown on DDD-C34-01.
- The cupboard is positioned beside the rear external wall to minimise outside-air duct lengths and avoid any front-elevation penetration.
- The unit is fixed to solid structure on proprietary resilient anti-vibration mounts. It is not fixed to a lightweight bedroom/studio partition.
- The cupboard has a removable or hinged access panel sized to allow removal of filters, fans and heat exchanger without disturbing permanent finishes.
- A trapped and insulated condensate drain is connected in accordance with the manufacturer instructions. All condensate pipework remains accessible for maintenance.

5.3 Air distribution and commissioning rates

The system is balanced. Fresh filtered air is supplied to the studio living/sleeping zone. Stale air is extracted from the kitchen zone and shower/WC. The design terminal rates are:

Operating mode	Kitchen extract	Shower/WC extract	Studio supply	Total balanced flow
Background	7 l/s	6 l/s	13 l/s	13 l/s
Boost	13 l/s	8 l/s	21 l/s	21 l/s
Purge / summer	Highest available balanced rate with summer bypass. Existing openable windows remain available for short-duration purge, but normal background ventilation does not rely on opening windows.			

The installer will measure and record the final supply and extract rates at every terminal. The total supply and extract volumes must be balanced within the manufacturer commissioning tolerance and must satisfy the applicable Approved Document F requirements.

5.4 Ductwork and internal terminals

- 125 mm rigid or semi-rigid smooth-bore ductwork throughout. Flexible duct is limited to short final vibration-isolating connections and is not used as the primary route.
- Ducts are as short and straight as practicable, supported independently and sealed to the manufacturer airtightness system.
- Ducts outside the thermal envelope, and intake/exhaust ducts within the building, are vapour-sealed and thermally insulated to prevent condensation.
- Room-side supply and extract branches include proprietary acoustic attenuators where required to meet the NOVA internal plant-noise limits.
- Maximum design velocities for the NR25 duty are 3.0 m/s in main ducts, 2.5 m/s in branch ducts and below 2.0 m/s at final runouts.
- Supply diffusers are located away from the bed position and directed to avoid draughts. Extract valves are at high level within the kitchen and shower/WC zones.
- Internal doors provide an effective air-transfer path equivalent to a 10 mm undercut above the finished floor.

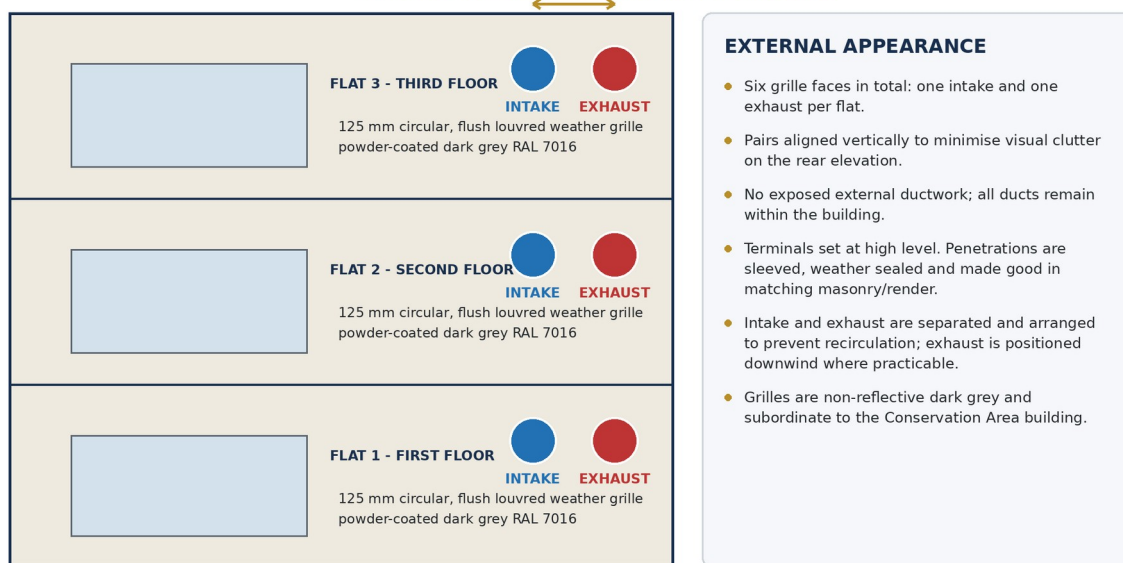
5.5 External intake and exhaust grilles

- All outside-air intake and exhaust terminals are on the rear elevation. No grille, louvre or duct is proposed on the King Street frontage.
- Each flat has one 125 mm intake grille and one 125 mm exhaust grille, giving six rear grille faces in total.
- The proposed grilles are circular flush louvred weather terminals, powder-coated dark grey RAL 7016, with no exposed external ductwork.
- The intake and exhaust for each flat are separated by at least 1.0 m centre-to-centre, or any greater separation required by the final manufacturer, and are positioned to avoid recirculation.
- Pairs are aligned vertically and set high level to minimise visual clutter. Penetrations are sleeved, weather sealed and made good in matching materials.

REAR ELEVATION - MVHR INTAKE AND EXHAUST TERMINALS

No ventilation grille or duct penetration is proposed on the King Street frontage.

Minimum 1.0 m centre-to-centre or greater manufacturer requirement



Drawing: DDD-C34-02 Scale: NTS Revision: P1 - For condition discharge

Figure 5. Rear-elevation terminal arrangement (Drawing DDD-C34-02).

5.6 Mechanical-services noise criteria

The complete installed MVHR system, including casing breakout, duct-borne noise, regenerated noise and terminal noise, must meet the following NOVA criteria:

- Studio sleeping area at night: no greater than 30 dB LAeq,T and NR25 in normal background operation.
- Studio living area during daytime: no greater than 35 dB LAeq,T and NR30.
- Bathroom/WC/kitchen extract operation: no greater than the NOVA report criteria, including 45 dB LAeq,T where applicable.
- No tonal, impulsive or intermittent characteristic that would attract attention within the studio.

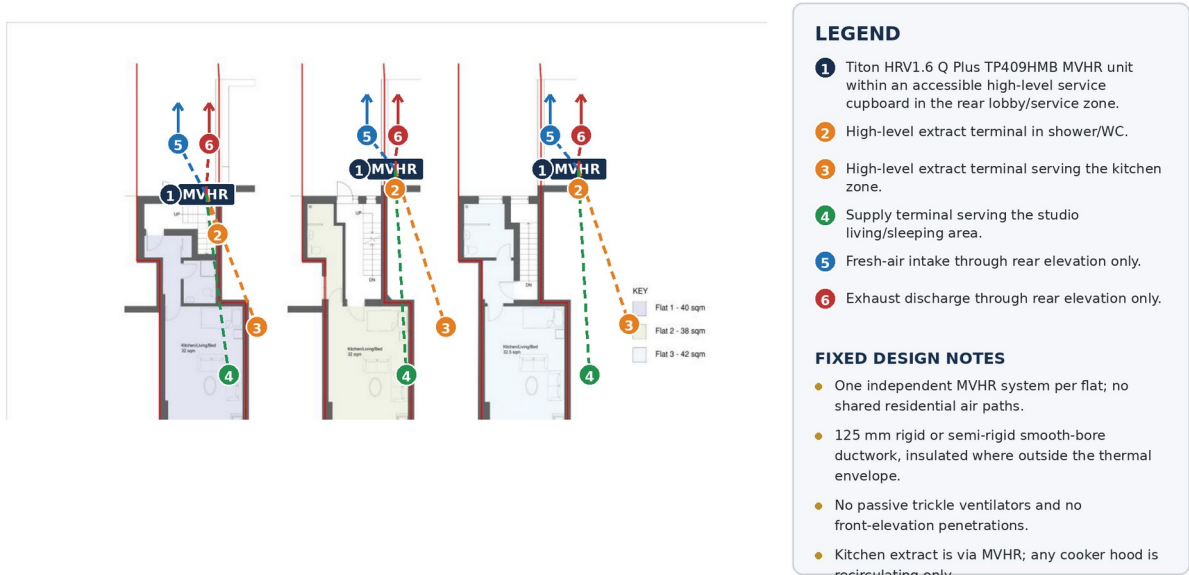
If commissioning calculations or measurements indicate that these limits may be exceeded, additional in-line attenuators, resilient supports or lower fan settings must be installed before occupation.

6. Proposed floor-plan layout

Drawing DDD-C34-01 applies the ventilation strategy to the approved floor plan without changing the room arrangement. In each flat, the unit and external connections remain in the rear service zone, while the studio receives one supply terminal and the kitchen and shower/WC each receive an extract terminal.

PROPOSED ACOUSTIC MITIGATION AND MVHR LAYOUT

7 King Street, Gravesend - planning reference 20260090



Base layout: Drawing 003A, Proposed Floor Plans, dated 21/01/2026. Service overlay is schematic and does not alter the approved room arrangement.

Drawing: DDD-C34-01 Scale: NTS Revision: P1 - For condition discharge

Figure 6. Proposed floor-plan service layout (Drawing DDD-C34-01).

7. Installation, inspection and quality control

Stage	Required record / hold point
Before procurement	Glazing manufacturer shop drawings and certified acoustic performance; MVHR product data; grille finish; installer design confirmation.
Opening-up	Photographs and record of existing party wall, joists, beams, steelwork and voids. Any common structural element referred to the acoustic consultant.
Before closing party wall	Acoustic consultant/agent inspection of independent frame, cavity, mineral wool, board layers, seals and service penetrations.
Before closing floors/ceilings	Inspection of mass-loaded vinyl, floating floor, mineral wool, isolation clips, board layers and perimeter isolation.
Ventilation first fix	Photographs of unit supports, ducts, insulation, attenuators, condensate and external sleeves before concealment.
Commissioning	Measured terminal airflow schedule, fan settings, supply/extract balance, controls, filter access and system-noise verification.
Before occupation	Condition 5 post-completion acoustic testing and report; completion photographs; operation and maintenance information.

8. Verification, retention and maintenance

- The secondary glazing, acoustic wall/floor treatments, MVHR systems, ducts, attenuators and grilles will be installed before any flat is first occupied.
- Condition 5 remains a separate pre-occupation requirement. Post-completion testing must demonstrate compliance with BS 8233:2014 and the NOVA report criteria. Sound-insulation testing must be undertaken by a UKAS-accredited organisation.
- If testing identifies a failure, the affected flat will not be occupied until additional mitigation has been approved and installed and satisfactory retesting has been completed.
- The approved measures will be permanently retained. Occupiers/landlord will be provided with instructions requiring the MVHR to remain operational, filters to be maintained, and acoustic seals/glazing not to be altered.
- No future replacement grille, fan, glazing unit or acoustic lining may have a lower performance than the approved specification.

9. Conclusion and request

The submitted scheme provides a coordinated and buildable response to Conditions 3 and 4. It fixes the secondary glazing construction and performance, the sports-bar wall and separating-floor treatments, the selected MVHR equipment, airflow duties, internal duct routes, acoustic criteria, and the number, size, colour and rear-elevation location of all external terminals.

The Local Planning Authority is therefore respectfully requested to approve the details submitted pursuant to Conditions 3 and 4 of planning permission 20260090, subject to implementation in full before first occupation and permanent retention thereafter.

CONDITION 5

This submission does not seek to discharge Condition 5. A separate post-completion noise survey and sound-insulation test report will be submitted before occupation.

10. Submission schedule

Item	Document
1	This Technical Statement - DDD/20260090/C3-C4/P1
2	Technical Drawing Package DDD-C34-01 to DDD-C34-06
3	NOVA Acoustics Residential Noise Assessment NP-013491 Rev 01
4	Approved Proposed Floor Plans Drawing 003A
5	Titon HRV1.6 Q Plus product/acoustic data