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PROJECT: FRESHWATER PARADE, BISHOPRIC,
HORSHAM, WEST SUSSEX RH12 1QD

JOB No: ABC845

DESCITION DESCRIPTION: PRIOR NOTIFICATION FOR CHANGE OF
USE OF THE FIRST FLOOR FROM RETAIL
(CLASS-e) TO 6-NUMBER RESIDENTIAL
DWELLINGS (CLASS-C3).

APPLICATION REFERENCE: DC/25/1445

CONTENTS: DISCHARGE OF CONDITION-1 FOR PRIOR
APPROVAL REF DC/25/1445; AS NOISE
ASSESSMENT & VIBRATION &
VENTILATION DESIGN REVIEW AS PRE-
COMMENCEMENT OF WORKST TO
APPROVED SCHEME.

**APPROVAL OF REPORT FOR DISCHARGE OF CONDITION-1 FOR APPROVED
PRIOR NOTIFICATION APPROVAL APPLICATION REF: DC/25/1445**

CONDITION-1: PRE-COMMENCEMENT CONDITION:

Prior to the commencement of development, a scheme of noise and vibration attenuation and ventilation sufficient to prevent overheating and maintain thermal comfort shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall be designed by a suitably qualified acoustic consultant in accordance with the recommendations of the Noise Report prepared by RPS reference JAJ03272.REPT.01-R1 dated 08 November 2022 and shall be based on the principles of BS8233. Occupation shall not be permitted to commence until the approved details are fully implemented and a validation report has been submitted to and approved in writing by the Local Planning Authority. The approved noise and vibration attenuation measures shall thereafter be retained and maintained in working order for the duration of the use in accordance with the approved details.

Reason:

As this matter is fundamental in the interests of future occupiers of the dwellings and in accordance with Policy 33 of the Horsham District Planning Framework (2015).

Planning statement reference discharge condition-1

In accordance with the approved prior notification of the change of use to current first floor commercial units into 6-self-contained flats, the requirement to provide detailed sound and mechanical ventilation report to address the points raised by RPS Group (ref: JAJ03272-REPT-01-R1 dated 08/11/2022) when initial prior notification application was submitted and granted for new 6-self-contained residential flats.

The further detailed design report provided as part of discharge condition by Aran Acoustics which will address the points concerning the works and their design recommendations will be adopted as part of works.

The main reason on the noise pollution to the site is considered due to site location positioned on main town centre where the traffic noise impact is considered as main source of environmental pollution to new residential units.

The recommendation provided by sound engineer to adopt 3db design allowance above minimum requirement under building regulation Part-E to meet criteria required for residential units set within BS-8233:2014.

The sound engineer report have carried detailed calculation for Façade noise break-in which is detailed on their report included with discharge of condition-1 under Appendix-C of their report. Subsequently the report also glazing configurations to achieve acoustic performance which the report identified glazing thickness and cavity and laminated finishing for each area as described in Table-5.2 of the report.

The sound-engineer report identified 2-method of glazing to comply sound resistance, will be depending on the works to include MVHR as means of mechanical ventilation to premises or natural ventilation to premises via opening windows.

As per recommendations in the sound report, If NO MVHR implemented to the project at each flat, then external windows to meet 38dB Rw which will have to be supplied as part of works.

In our design and site assessment of the proposal, the works will require to include MVHR since such mechanical ventilation is suitable to the site and avoids residents having to open windows to achieve ventilation to designated flats since opening windows can result to ingress sound pollution from highway traffic into premises.

Based on above statement, the project will include MHVR incorporated as part of development to each flat.

The most common ways to meet the 38 db threshold include utilizing 12.8mm single-pane acoustic laminated glass or asymmetric double-glazed units (IGUs) featuring an acoustic PVB interlayer (such as Pilkington Optiphon or Stadip Silence).

The supplier which provides such glazing is
Pane-Relief; (FENSA #43465)
36 Saltmarsh Drive, Bristol, BS11 0NG.



Technical specification

Overall thickness ~28mm

Build-up

8.8mm acoustic-laminated outer (4+4 with 0.76mm acoustic PVB) / 14mm argon cavity / 4mm clear inner with optional low-E

Outer-pane standard BS EN 14449 (laminated)

Rw (Weighted Sound Reduction Index) 40 dB to BS EN ISO 717-1

Rw + Ctr (road-traffic spectrum) 36-37 dB (typical)

U-value (centre-pane, with low-E inner face 3) 1.2 W/m²K

U-value (without low-E) 1.5 W/m²K

g-value 0.58

Light transmittance ~78%

Weight ~23 kg/m² (manageable load in standard frames)

Standards BS EN 1279, BS EN ISO 717-1, BS EN 14449, BS EN 12600 (impact class 2(B)2 via laminated.)

Based on our design recommendation, the above glazing system not required for the project since MVHR system will be installed to premises.

Based on the recommendation by the sound engineering report, the recommended glazing with MVHR supplied as part of works to meet 34dB.

To achieve a 34 dB noise reduction (Rw rating), you have several reliable UK glazing options, as this is a standard benchmark easily met by high-quality monolithic panes or standard acoustic double-glazed units (IGUs).

A single **10 mm toughened glass pane** naturally hits around **34 dB** which is classified as **Monolithic Glass**.

Subsequently also viable to use **Acoustic Laminated Glass**, which is 8.8 mm or 10.8 mm acoustic laminate pane (which features an acoustic PVB sound-dampening interlayer) will easily meet or exceed **34 dB (ranging from 35 dB to 38 dB)**, while remaining thinner and lighter than heavy monolithic glass.

Alternatively any standard 4-20-4 or 6-16-4 double-glazed unit typically achieves between **30 dB** and **34 dB**. To guarantee a minimum of **34 dB** therefore needing to use 6mm+ thick glazing as outer panels and 16mm cavity gap with 4mm inner glazing.

The supplier which provides such glazing is
Pane-Relief; (FENSA #43465)
36 Saltmarsh Drive, Bristol, BS11 0NG.

Based on their recommendations; the double glazing panel of an asymmetric **6.4mm - 16mm cavity – 4mm laminated-acoustic build-up at $R_w+C_{tr} \approx 34$ dB drops the same room to ~21 dB indoors — comfortably under BS 8233 and inside the WHO comfort zone.**

Therefore based on application of MVHR as means of ventilation to premises and application of laminated double glazing by Pane-Relief using 6.4mm – 16mm – 4mm will meet 34dB to window panels.

The report provided by Aran Acoustics have detailed the means of ventilation required to designated flats under section 5.3 & 5.4 and based on the findings, the proposal will INCLUDE MVHR as part of works to retain the means of ventilation to premises and also reduce the noise requirement to windows at 34dB without needing to include any trickle ventilators which also reduces ingress of sound pollution into premises.

All means of mechanical services to project to design and meet the recommendations as set out in section 6.0 of the report and no external plants to be installed to project.

As part of design recommendations to supply the sanitary areas with 15L/Sec mechanical ventilation and all kitchen to be supplied with 30L/Sec mechanical ventilation to flow to rear elevation of premises and avoid any noise ingress from front highway traffic.