

MPF/PR0665/L02

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Dear Lauren

RENAISSANCE RESIDENTIAL, MANCHESTER

I write in response to planning condition 14a of the planning approval for Renaissance, Manchester (planning reference 132088/FO/2021).

PLANNING CONDITIONS

Planning condition 14a of planning approval 132088/FO/2021 states:

- Notwithstanding the recommendations within the Fisher Acoustics Renaissance (Residential) Manchester Environmental Noise Study October 2021 Ref:PR0657-REP05A-MPF, before the development commences a scheme for acoustically insulating and mechanically ventilating the residential accommodation against noise from adjacent roads and commercial / industrial noise sources and the insulation requirements and specification for service risers /lift shafts shall be submitted to and approved in writing by the City Council as local planning authority. The approved noise insulation scheme and vibration and reradiated noise mitigation measures shall be completed before any of the dwelling units are occupied.

The following noise criteria will be required to be achieved:

Bedrooms (night time - 23.00 - 07.00) 30 dB LAeq (individual noise events shall not exceed 45 dB L_{Amax,F} by more than 15 times)

Living Rooms (daytime - 07.00 - 23.00) 35 dB LAeq

It is understood that the outstanding information required to allow discharge of condition 14a relates to the service risers and lift shafts.

SERVICE RISERS

Figure 1 shows the location of smoke extract shafts and mechanical & electrical service risers within the proposed building. The smoke shaft risers are to be separated from apartments by either a solid concrete wall of thickness 400 mm or a fire-rated shaft wall that has been specified to achieve a minimum sound reduction index of 56 dB R_w. The smoke extract fans at the top of the smoke shafts are to be provided with a duct-mounted attenuator to reduce fan noise able to enter the smoke shaft.

In addition, the smoke extract fans will only operate during periodic test runs and during emergencies. During test runs, the smoke fans are expected to operate at approximately 20% of the airflow rate of the emergency operation, thus further reducing noise levels.

The mechanical and electrical risers carry either cables or low-noise pipework. Mechanical and electrical risers have been specified to achieve a minimum sound reduction index of 46 dB Rw.

As a consequence, noise due to smoke extract plant and mechanical & electrical services is expected to comply with the noise criteria identified in condition 14a.

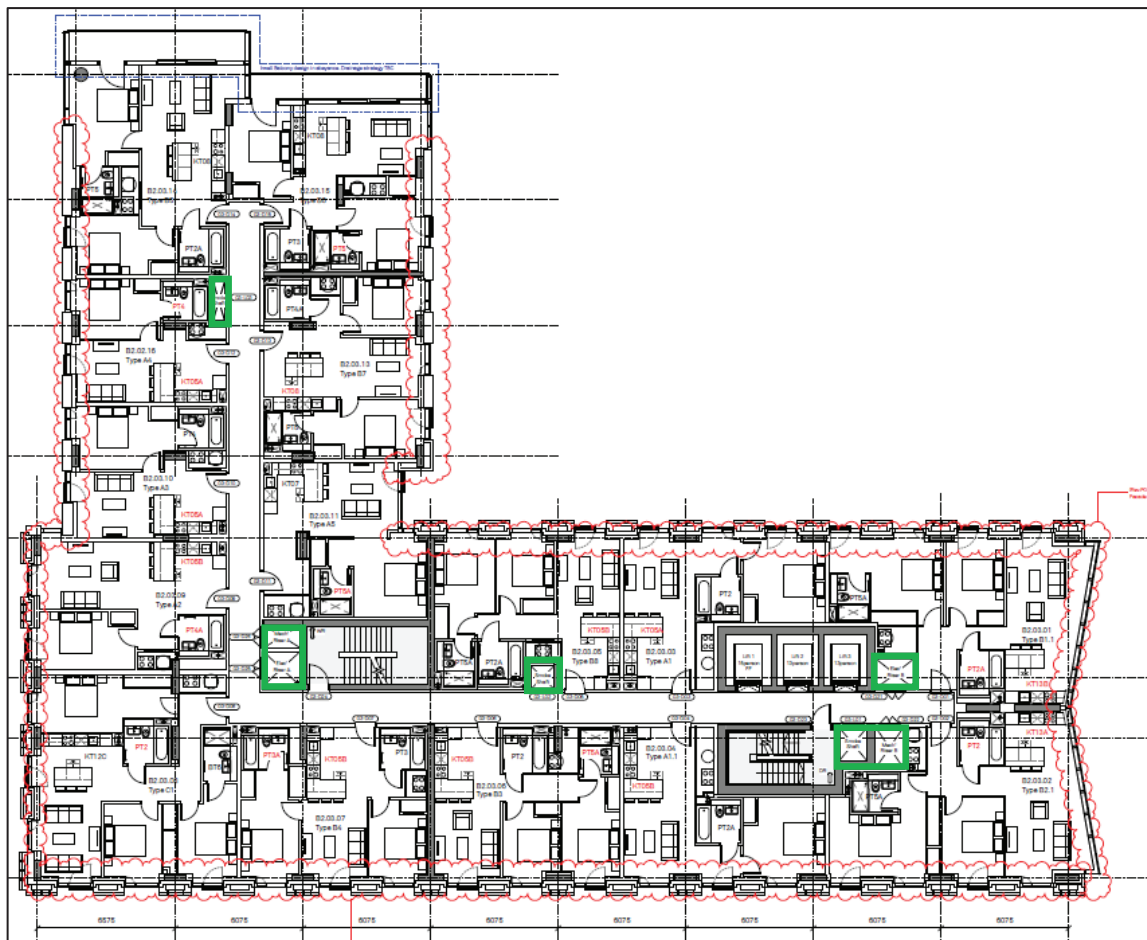


Figure 1: Location of service risers

LIFT SHAFTS

The lift shafts that serve the building are separated from apartments by a solid concrete wall of thickness 400 mm. The sound reduction index of these walls is at least 65dB Rw. In addition, to achieve a further reduction in noise radiated by the lift shaft, the concrete walls are to be drylined in apartments with 15 mm thick dense plasterboard fixed to metal liner channels to create a minimum cavity of 30 mm, with mineral wool within the cavity

Given the above acoustic provisions, the noise level in apartment rooms due to lift movements is expected to comply with the recommendations of BS8233: 2014 'Guidance on sound insulation and noise reduction for buildings', which recommends that noise levels of 25 dB L_{Amax} and 30dB L_{Amax} are not exceeded in bedrooms and living rooms respectively due to lift movements.

If there is any aspect of the above that you would like to discuss then please do not hesitate to contact the undersigned.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Matt Fisher', with a stylized flourish at the end.

MATT FISHER CEng, BEng, MIOA
For and on behalf of Fisher Acoustics Limited