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Planning Department
Eastleigh Borough
Council

Sent Electronically only

20 October 2023

Discharge of conditions 12 of full planning permission F/19/86233

Land to the North and East of Boorley Green, Winchester Road, Botley, SO32 2UA

We are submitting the information below in relation to application ref: DC/23/95159 - conditions 12. A meeting was held with Eastleigh's Environmental Health Officer on 11th October, to discuss the issues around ventilation and how these could be resolved. The further response – October 2023 addresses the issues raised and discussed at the meeting.

Condition 12 – Entertainment Noise

States:

'Prior to development above slab level of Blocks B, D and E, details of the measures to be incorporated into the building design to protect against the ingress of entertainment noise from current and future activities at Botley Park Hotel shall be submitted to and approved in writing by the Local Planning Authority. The measures shall include sufficient sound insulation and provision of mechanical ventilation for habitable rooms, with the aim of achieving internal entertainment noise levels from the Botley Park Hotel not exceeding any of the following criteria:

- *45dB Leq, 63Hz 5 minutes*
- *28dB Leq, 125Hz, 5 minutes*
- *20dBA LAeq, 1 minute*

The ventilation system shall be designed to achieve noise conditioning to mask residual entertainment noise ingress and counteract the risks of neighbour noise nuisance. Prior to the first occupation of any residential unit within Blocks B, D and E, the approved measures shall be implemented, and written confirmation shall be provided to the Local Planning Authority by a competent acoustic consultant that the approved measures have been implemented satisfactorily. The approved measures shall be thereafter retained and maintained.'

Response – 14/4/2023:

Previously we provided information on the acoustic performance of the proposed external wall when compared against the requirement of each octave band. This information showed that the predicted internal noise levels were as follows:

63Hz 5 minutes - required 45dB Leq – predicted 36dB Leq

125Hz, 5 minutes - required 28dB Leq, - predicted 17dB Leq

These levels are within acceptable limits.

Report provided - L1424.1 V2 - Entertainment Noise

19/5/2023 - First response received from Environmental Health:

Environmental Health asked for calculations of break in noise to the dwellings using the BS8233 method and including for ventilation self-noise and break in through the ventilator. Could the report be amended to include this information, or it be provided as an added appendix.

Response:

Report L1424.1 - Entertainment Noise was amended to include this information. It was also stated in this response that the use of Mechanical Ventilation with Heat Recovery (MVHR)s on this site had been considered however, as the required sound performance can be achieved through the use of normal trickle vents, the installation of these had been discounted.

Having provided the requested information, the following response was provided from Eastleigh Borough Council.

Report provided - L1424.1 V4 - Entertainment Noise

19/7/2023 - Second response received from Environmental Health:

As discussed earlier I'm coming back to you with my comments on the proposal that has been put to you by the developer that the internal noise levels in the flats can be met without the need for MVHR.

This may be so; however, I would stress that this is not good acoustic design, or high standard of design that the NPPF encourages, nor does it fully address the issues of concern. The developer needs to take account of their agent of change responsibility, NPPF 187, by taking steps to ensure that the adjacent hotel does not have unreasonable restrictions placed on them as a result of development permitted after they were established. There is a clear potential for noise nuisance impact on future residents from the legitimate use of the Hotel for entertainment purposes, and mitigations need to be sufficient to minimise the requirement for the council to take nuisance abatement action against the hotel in response to complaints.

This approach informed the recommendations of the applicant's own noise consultants who previously recommended MVHR as the solution.

We are concerned that the proposal would result in 'sealed boxes', with the opening of windows being the only way to increase ventilation, thereby subjecting the residents to increased noise levels from the hotel, and the likelihood of action being taken against the hotel by Environmental Health.

Should the applicant wish to propose an alternative scheme we will of course be happy to consider it, however the amended scheme needs to demonstrate how the agent of change principle has been adequately addressed and the how adjacent hotel will not have restrictions placed on them as a result of development.

Response:

The previously submitted noise report by Red Twin demonstrated that the internal noise level maximums specified in planning condition 12 are all expected to be met when windows are closed based on the entertainment noise levels provided in the original 24Acoustics report. The assessment was based on windows being closed and in the “standard” ventilation state with trickle vents open. This is in accordance with the relevant standards. The ability to achieve these internal noise levels with windows closed has not been disputed in the most recent response above or in the meeting of the 11th October with the EHO.

Based on the above response and the discussion at the meeting of the 11th October, the concern from the EHO appears to relate to the ability of residents to ventilate the rooms which could lead to the opening of windows. It is considered that the ventilation option identified in the report - Greenwoods 5000EA acoustic trickle vent per room – as selected based on discussions with the design team - is sufficient to ventilate the room without the need to open windows, when used in conjunction with extract fans as noted below.

The current proposal of the acoustic trickle vents is supplemented by Decentralised Ventilation System 3 ([DMEV - Decentralised Mechanical Extract Ventilation | Vent-Axia](#)) – a mechanical ventilation system - which, with acoustic rated windows and a single Greenwood 5000EA trickle vent per habitable room, is compliant with building regulations Part F and will achieve the required dwelling ventilation rates without the need to open windows (apart from the occasional purge ventilation, as further explained below). No alternative ventilation standards are specified or required by condition 12. Consequently, the requirements of condition 12 are met – the proposals meet the specified maximum noise requirements and allow for mechanical ventilation to the properties, which provide ventilation levels in line with Building Regulations.

Purge ventilation is required regardless of which ventilation system is adopted, i.e., would be applicable to System 3(DMEV) & System 4(MVHR). This is commonly achieved through the opening of a window.

The EHO accepted this in the meeting of the 11th October.

In conclusion the details above have demonstrated that the apartment buildings will not be ‘sealed boxes’ but will be ventilated in accordance with best practice and the requirements of the Building Regulations whilst adhering to the requirements of condition 12.

For context MVHR (System 4), is a centralised, whole-house system which uses recovered heat from a property to warm incoming air. It is designed to run continuously all year round.

Different rooms in a house create different levels of heat. 'Wet' and hotter rooms are the bathrooms and kitchen, which generate additional heat through activities such as cooking and showers; the activities that would usually encourage residents to open a window or to run an extractor fan.

With a MVHR system, this warm, stale air is passed through a heat exchanger in the air handling unit and the heat extracted is then used to warm the incoming fresh air. (Fresh air is drawn in from outside and filtered.) The pre-warmed air is then delivered (moisture and cooking smell-free) into regular living areas through a ducting system with outlets in the walls or ceilings of rooms.

To clarify MVHR is neither a cooling or heating system, it will purely recover the heat that is generated within a dwelling, so rather than the heat be extracted directly to external it recovers up to 90% of that heat and returns it back into the dwelling - and if used incorrectly during the summer periods it may contribute to a hotter environment and the homeowner may require the use of opening windows if they feel the dwelling is to warm.

We are proposing the use of Ventilation System 3 (decentralised continuous mechanical extract – dMEV) which is specified to all plots denoted within Zone A. This system is fully comparable to MVHR System 4, with regards to ventilation, but does not include the recovery of heat from the extracted air, so therefore does not recover the heat that is generated within a dwelling or actively contribute to the heating up of the property.

System 3 (dMEV) comprises of the following:

- Continuously running extraction fans to wet rooms & kitchens ducted directly out to external air as per specialist Vent Axia layouts in accordance with Approved Document Part F 2021.
- 1 No acoustic rated background trickle vent within the window frame for each habitable room achieving minimum 4000mm² ventilation equivalent area. Product specified is Greenwood 5000EA as per submitted datasheet.

This has been reviewed by Red Twin (Acoustic consultants) and deemed suitable to achieve the maximum internal noise levels in relation to Condition 12, and also complies with Approved Document Part F 2021.

We can advise that the glazing specification to windows within Zone A have also been reviewed by Red Twin in relation to Condition 12 and in conjunction with the above ventilation requirements and deemed acceptable. Details are shown below:

Zone A

Glazing: Guardian Glass 10/18/8.76PVB

Vent: Greenwoods 5000EA trickle vent (1 No per room)

Balcony Doors: Min. performance 33 dB $R_w + C_{tr}$

Zone B

Glazing: Guardian Glass 10/18/8.76PVB

Vent: Munster M335 (1 No per room)

Balcony Doors: Min. performance 21 dB $R_w + C_{tr}$

These two configurations are expected to meet the design requirements, based on the data provided, and the noise levels derived from the original 24Acoustics report.

The proposed mechanical ventilation system is compliant with building regulations and is considered a more suitable alternative to the use of MVHRs.

We have considered the issue of purge ventilation and human nature and can confirm that both the System 3 and MVHR system 4 will still potentially result in residents opening their windows at certain times. Documentation will be provided to new residents on the use of the system provided to show how the space can be ventilated without opening windows, although clearly the decision to use the ventilation systems provided or open a window will ultimately be down to each occupier's preference. Nonetheless, the proposals provide a method of both passive and active mechanical ventilation which meets with building regulation standards to reduce the demand for residents to open windows. No other ventilation standards have been specified.

If additional ventilation beyond building regulation standards were provided to habitable rooms this would itself create the potential for noise through the use of extract fans. Furthermore, it would result in additional points of external noise entry (for example from vents etc.) which would in themselves require noise mitigation to the building fabric. Such systems would also require further maintenance and cost for residents and in Abri's extensive experience are not used appropriately by residents much of the time.

It should be noted that there are no defined levels of additional ventilation to aspire to, in the same way as there are for acoustics, therefore it is subjective as to what levels need to be achieved. We have taken on board the comments made by Environmental Health with regards to periodic air changes and consider that this system still provides a better alternative.

Therefore, taking into account all the information provided to date for Condition 12, we have provided sufficient information and supporting documents to show that the maximum internal noise level targets can be met/exceeded with windows closed (which does not appear to be disputed by the Environmental Health Officer in their latest comments).

We have also shown that a MVHR system is not an appropriate system in this case and would not reduce the likelihood of windows been opened by residents as it is a heat recovery system. A mechanical ventilation system is provided, alongside acoustic trickle vents, which will provide ventilation levels in accordance with building regulations – no other target level of ventilation has been specified in the condition or elsewhere.

Consequently, the requirements of condition 12 have been met and we have shown that suitable internal noise levels for Blocks B, D and E can be provided, and therefore the condition should be discharged.

Reports submitted:

2500EA.5000EA Datasheet

Vent-Axia Lo-Carbon NBR dMEV C – Datasheet

Drawings supplied by Vent-Axia showing proposed position of fans and dMEV units to each plot

-  CAS 11573 - Rev A - Boorley Gateway - 01 - HT 304i.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 02 - HT 305i.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 03 - HT 308.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 04 - HT 309I.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 05 - HT 350.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 06 - HT 2303.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 07 - FOG.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 08 - Retail Block - First Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 09 - Block A - Ground Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 10 - Block A - First Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 11 - Block B - First Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 12 - Block B - Second Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 13 - Block C - Ground Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 14 - Block C - First Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 15 - Block C - Second Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 16 - Block D - Ground Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 17 - Block D - First Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 18 - Block D - Second Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 19 - Block E - Ground Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 20 - Block E - First Floor.pdf
-  CAS 11573 - Rev A - Boorley Gateway - 21 - Block E - Second Floor.pdf