

Consultation Response from: KC Environmental Health (Pollution & Noise Control)		
2018/94181 - 31-37, Beast Market & 1, Southgate, Huddersfield, HD1 1QF		
Alterations to convert hotel (C1) to 12 student studios (within a Conservation Area)		
Date Responded: 30 May 2019	Responding Officer: Andrew Jameson (for Air Quality) & Richard Hume	Responding Ref: WK/201909268
In our original consultation response dated 31 Jan 2019 we recommended that the application should not be determined until a Noise Assessment and an Air Quality Impact Assessment had been carried out. We also previously recommended conditions regrading contaminated land and electric vehicle charging points which should be retained. Noise An Ambient Noise and Building Envelope Assessment by Philip Dunbavin Acoustics Ltd dated 18 April 2019 (ref: CW/J002447/3731/01) has now been submitted. The report details long term measurements of external noise levels around the proposed development which it advises is mainly from road traffic with additional noise from church bells and music and patron noise from nearby licensed premises. It also predicts the likely noise from a nearby entertainment premises which were not operating at the time of the assessment. It considers the likely attenuation that will be provided by the existing building envelope including the existing 4-200-6mm secondary glazing which is to be retained. From this information it predicts the indoor sound levels at the development and advises that these are within the recommended levels, including NR20 which is relevant for the entertainment noise. These predictions are based on windows being kept closed, the report advises that the development will be mechanically ventilated and it notes that care should be taken to ensure that self-noise generated by the ventilation system does not exceed the internal noise criteria specified in the report. I consider that the report demonstrates that the high external noise levels around the proposed development can be effectively mitigated against and is therefore not a barrier to development. However, there is some uncertainty regarding the level of attenuation that will be provided by the glazing. Table 9 in the report advises that the glazing will provide a sound reduction (R_w) of 44dB, based on a manufacturer's information. However in Table 10 it advises that the existing glazing will provide a sound reduction (R_w) of 38dB at the front of the premises and 33dB at the rear. It is accepted that the existing glazing may not meet the high acoustic specification of the quoted manufacturer's glazing system; the design and installation of secondary glazing can have a significant impact on the levels of sound attenuation it can achieve. It is however unclear why there is a different acoustic specification for the front and rear of the premises which the report says has the same glazing. We need to be satisfied that the existing glazing to the noise sensitive rooms will provide sufficient sound attenuation. In addition, detailed information regarding the proposed mechanical ventilation has not been provided, we need to be satisfied that this provides adequate ventilation, without the need to open windows, to prevent overheating in warm weather and without causing unacceptable self-generated noise.		

Therefore a condition requiring a ventilation scheme will be required together with a condition requiring verification that satisfactory indoor sound levels are being achieved.

Air Quality

An Air Quality Assessment Report by Resource and Environmental Consultants Ltd dated April 2019 (ref: AQ107409) has also been submitted. This report has been assessed, the methodology used to construct the air quality impact assessment is in line with national guidance. However, while we are satisfied with the methodology for deriving inputs for the model, we do have concern with the outputs when measured against monitored data. The model provided in the report was validated against Kirklees Council's air quality monitoring network at 2 locations. One of these is on the same side of the ring road as, and within 100m of the proposed development. The other monitoring location is on Wakefield Road in close proximity to the Firth Street junction. The model significantly under read at both locations, 78% under on the ring road and 52% on Wakefield Road. The consultant then derived a correction factor of 3.0646 to apply to the results, which is very high and does not address the reason why the model is 4 times lower than monitored concentrations on the ring road or 2 times lower on Wakefield Road. By applying a factor of this magnitude to increase the model results by threefold in this manner significantly increases uncertainty around the result because the difference at each location may be a result of localised issues at each link rather than a discrepancy across the whole model.

Given the proximity of the ring road diffusion tube to the development, one would expect the conditions at the façade of the property to be more in line with this result rather than be below the health related objective as predicted by the model. It is my professional opinion that the monitoring location on Wakefield Road has downscaled the correction factor and resulted in the model under predicting the concentrations along the ring road. If you scale the model to the concentrations to the levels observed along the ring road, the concentrations presented for the first floor (originally 29.45 – 34.59) would be between 35.32 and 41.49 which is a breach of Health Related Objectives.

Consequently we consider that the concentrations reported in the impact assessment are under representative of the actual conditions and we anticipate the façade facing the ring road is in exceedance of the objectives. Therefore, in order to safeguard the health of future residents of this development air quality mitigation measures are required. Either of the following options would be acceptable:-

- To have a ventilation inlet for the development to the rear of the property at height, which was the solution successful utilised as part of planning applications 2011/93327 at the Palace Theatre or 2013/90650 at 44-48 Westgate
- To ventilate from any façade with the use of pollution scrubbers to remove the pollutants, which was the solution successful utilised as part of planning applications 2013/93389 at Waverly Chamber or 2012/92620 at 1a Upperhead Road

In order to achieve the above, we will require a full ventilation scheme and details of the proposed ongoing maintenance requirements. Maintenance details are especially important if the developer chooses to pursue the scrubber option.

Recommended additional conditions**NC6 Validation Report Confirming Noise Levels Achieved - (New residential Development Near to Transportation Noise Source) – Condition**

Before the development is first occupied written evidence shall be submitted to the Local Planning Authority to demonstrate that the following internal sound levels have been achieved throughout the development including at times when the installed mechanical ventilation is operating at the setting required to control thermal comfort:-

- a) No more than 35dB $L_{Aeq,16\text{ hours}}$ between 0700 and 2300 hours in any noise sensitive rooms in the development
- b) No more than 30dB $L_{Aeq,8\text{ hours}}$ between 2300 and 0700 hours inside any bedroom in the development.
- c) No more than 45 dB $L_{AF1,15\text{min}}$ between 2300 and 0700hrs inside any bedroom in the development.
- d) No more than NR20 $L_{eq,15\text{ min}}$ between 2300 and 0700hrs inside any bedroom in the development.

If it cannot be demonstrated that the aforementioned sound levels have been achieved, a further scheme incorporating further measures to achieve those sound levels shall be submitted for the written approval of the Local Planning Authority. All works comprised within those further measures shall be completed and written evidence to demonstrate that the aforementioned sound levels have been achieved shall be submitted to and approved in writing by the Local Planning Authority before the development is first brought into use.

Air Supply to and Ventilation of the premises

Before the residential accommodation is first brought into use, a ventilation scheme:-

1. To mitigate against poor air quality and also
2. to provide alternative ventilation to opening windows (because windows need to be kept closed for noise mitigation measures)

shall be submitted to and approved in writing by the Local Planning Authority. The ventilation scheme shall show the following:-

- How the poor air quality in the vicinity of the development will be mitigated against by providing a satisfactory air supply for the inside the development that meets the National Air Quality Objectives
- How all habitable rooms within the development will be provided with sufficient ventilation to help control thermal comfort and avoid over heating during hot weather without the need to open windows.
- How the self-generated noise arising from the operation of the ventilation system will meet the indoor sound levels detailed noise related condition above.
- the ongoing maintenance regime for the installed ventilation system to ensure that it continues to meet the above mentioned requirements

All works which form part of the approved scheme shall be completed prior to first occupation of the accommodation and retained thereafter.