

MEMORANDUM



From: Environmental Health & Housing
Standards Lead

To: Planning
Lead

Our Ref: 7863/20

Your Ref: P/2019/0938

Date: 24th August 2020

Discharge of condition application P/2019/0938
Land South Of, Jacques Way, Wrexham, LL11 2BY
Noise Report

Having reviewed Noise Survey Ref BA NS226/3 'Proposed Residential Development Land at Jacques Way, Wrexham LL11 2BY' by Blue Acoustics I would make the following comments:

With regards to the external plant noise from the Premier Inn the report (section 8) based the assessment on three condenser units being run:

To assess the potential for noise impact, a scenario of 3 units running simultaneously was used to reflect general summertime operation.

Given that the report cites the presence of seven condenser units, no evidence has been provided to suggest that all seven will never be running together. Therefore this would suggest that this be taken as the worst case scenario to provide a robust assessment.

As one unit running has a quoted sound pressure level of 52 dB, seven units running simultaneously would be expected to have a sound pressure level of 60.5 dB, this can be corrected for distance to be $(60 - 17) 43$ dB at the nearest proposed property. The report has also applied a noise impact penalty of 8 dB for tonality, impulsivity and intermittency making the final modelled value $(43 + 8) 51$ dB. This changes the combined **night time** noise level to:

$(\text{Rail}) 38.5 \text{ dB} + (\text{Road}) 45 \text{ dB} + (\text{Commercial corrected}) 51 \text{ dB} = 52.2 \text{ dB}$ at the nearest proposed development

In accordance with Technical Advice Note (TAN) 11:

To check if any individual noise source is dominant (for the purposes of this assessment) the noise level from the individual sources should be determined and then combined by decibel addition (remembering first to subtract 2 dB(A) from any aircraft noise contour values). If the level of any one source then lies within 2 dB(A) of the calculated combined value, that source should be taken as the dominant one and the site assessed against the appropriate NEC for that source, rather than using

the "mixed source" NECs. If the dominant source is industrial noise see paragraph B17 of Annex B.

The condenser units are within 2 dB of the combined sound pressure level therefore are expected to be the dominant noise source when all seven units are running. As the night time modelling at position 1 was 'corrupted by the presence of Premier Inn plant noise' this further supports this conclusion. As a single value for the background noise rating has not been provided it is not possible to compare the modelled sound pressure levels against the background to determine expected annoyance as described in BS4142. If this information cannot be provided then the mixed used category of TAN 11 will be used.

A modelled value of 52.2 dB(A) for mixed sources is a category 'B' rating in TAN 11:

Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection.

It is therefore appropriate to recommend additional noise attenuation on any planning permission that may be granted:

For day time noise a combined value with seven units running is estimated to be:

(Rail) 47.3 dB + (Road) 46.2 dB + (Commercial corrected) 51 dB = 53.5 dB at the nearest proposed development

This is above the level (50 dB) the World Health Organisation (WHO) recommends to avoid annoyance in external areas. The night time estimated value of 52.2 dB is also above the WHO's recommended level (45 dB) for an undisturbed night's sleep.

The report made recommendations for the noise attenuation rating of windows (section 7) and I recommend that these be conditioned. The report further stated (section 8):

It is therefore recommended that no living space windows be situated along the northern facade of plot 8.

In light of lack of evidence showing that the other properties along the northern boundary of the proposed development will not be adversely affected, the above recommendation should be conditioned to all plots on this boundary.

In order to protect the amenity of residents along the northern boundary. I would recommend a condition requiring a suitable acoustic barrier be erected either along the proposed development's boundary or adjacent to the condenser units. This should provide attenuation such as to lower the noise levels of the external recreational areas of the northern boundary properties to below 50 dB(A) when all seven condenser units are running.

Regards

A handwritten signature in cursive script, appearing to read "Campini".

Paul Campini
Enforcement Officer