

Mr Joe Harding  
 Berkeley Homes (Oxford & Chiltern) Limited  
 Berkeley House,  
 Farnham Lane,  
 Farnham Royal,  
 SL2 3RQ

Date: 22nd April 2020  
 Reference: R8220-3 Rev 0

Dear Joe

**Re: Vastern Road, Reading- Noise-Related Planning Conditions**

Further to our recent correspondence I am pleased to provide formal comments to points raised by Reading Borough Council in relation to our noise impact assessment (Reference R8220-2 rev 0) for your Vastern Road scheme.

The points raised by the Council are reproduced below (in italics) together with our comments.

1. *The noise assessment has assumed a noise limit for noise from the SSE transformers and cooling fans of 5 dB above the L90 background for the external private amenity areas (and presumably façade of the development). The RBC policy is as follows:*

*The predicted specific sound level (LAeq,TR) (with reference to BS:4142) as measured at a point 1 metre external to the nearest noise-sensitive facade shall be at least 10dB below the pre-existing background sound level, LA90,T when all plant/equipment (or any part of it) is in operation. The predicted rating level, LAr,Tr (specific sound level plus any adjustment for the characteristic features of the sound) as measured at a point 1 metre external to the nearest noise-sensitive façade (habitable window of a dwelling) shall not exceed the pre-existing background sound level, LA90,T when all plant/equipment (or any part of it) is in operation.*

*I appreciate that this is a slightly atypical situation in that the application is not for new mechanical plant but for new residential in the vicinity of existing mechanical plant, however it is my view that this policy still applies in order to protect the amenity of the new residents. There is the opportunity to design the development such that noise impacts from the plant can be minimised – layout of the development or additional mitigation at source to reduce the plant noise and to enable more of the residents to be able to open their windows without being affected by the noise.*

We have designed the site to ensure that daytime the rating noise level associated with the noise from the substation operation is no greater than 5 dB above the prevailing background noise level in external amenity areas. This is considered acceptable on the following basis:

- As an exclusively flatted development there will be very minimal private external amenity space, only balconies to some areas;

- Significant efforts have been made to design the site to reduce noise impact. 24 Acoustics has been working with Berkeley Homes on the design of the scheme for over 18 months. It is considered fully optimized with regards to minimizing noise impact;
  - The flats most affected by noise from the substation operations will be fitted with specialist acoustic glazing, alternative means of ventilation and measures to prevent excess heat build up. There will be no requirement to open windows on this basis and therefore the noise impact externally to dwellings (where there is no external amenity space is irrelevant);
  - Appeal case history indicates that, in scenarios in which the receiver is brought to the noise (as is the case here) noise impacts of up to + 10 dB (difference between BS 4142 rating noise level and background noise level). Residents in this scenario are significantly less sensitive to noise than the scenario in which new noise is introduced to existing residents.
2. *Has the glazing specification been designed taking into account the 100 Hz tonal noise from the transformers? Can further detail be provided on this please?*

Yes. As our report states we have engineered the development to ensure that noise levels internally in habitable rooms do not exceed the criteria of the Salford University/ Defra research report NAN45. This sets threshold noise levels at frequencies between 10 and 160 Hz (in 1/3 octave bands) which includes the 100 Hz noise generated by the transformers.

I trust you will find the above satisfactory. Please do not hesitate to contact me should you have any further queries.

Yours sincerely  
**For 24 Acoustics Ltd**



Reuben Peckham BEng MPhil CEng MIOA  
Director & Principal Consultant