

Based on the noise levels taken (for original application) and information available I can provide predicted single figure internal level for the dwellings.

Looking at the plans, the following site layout is apparent:

Flats 11, 12, 13 & 14 face London Road

Flats 15 & 16 face the rear aspect and are completely screened from all sources

Flats 9 & 10 face the side elevation and are predominantly screened from London Road and all flats are screened from the plant due to the good acoustic design and not having any noise sensitive rooms facing the plant.

The plant will also have further noise reduction works applied to it and therefore reduce the noise break out even more.

The measured levels at 1st floor to the front of the site were:

67dBA LAeq16hour, 59dBA LAeq 8hour, 75dBA LAmax

A further -5dB acoustic feature correction is applied to the levels above (-3dB for the screening offered by the building façade and -2dB for the extra distance of the dwellings at 2nd floor). In reality it may be that the screening reduction may exceed this.

Therefore the levels at the front of the site would be:

62dBA LAeq 16hour, 54dB LAeq 8hour, 70dB LAmax

Regardless of the façade construction, an open window will offer only -13dB sound reduction and therefore using this single figure reduction, the below will be the internal levels with windows open (flats 11, 12, 13 & 14 facing London Road).

49dBA LAeq 16hour, 41dBA LAeq 8hour and 57dB LAmax.

It is clear to see that these levels are above the levels stated in BS8233: 2014. Please note that it will be impossible to achieve these levels in this location due to the road traffic noise

Due to the proposed windows being installed it is clear these levels will be achieved with the windows closed.

It is accepted that the above levels are above the levels as stated in BS8233: 2014 but they are below the threshold scale as listed in the AVO guide as shown below.

Internal ambient noise levels		
LAeq 16hour 0700-2300 >50dB	LAeq 8hour 2300-0700 >42dB	Individual noise events 2300-0700 Normally exceeds 65dB LAmaxT

Figure 3-2 Qualitative guidance on combined effect of internal ambient noise level and duration for the overheating situation

