

ACOUSTIC STATEMENT : (continue)

Measure of the impact of revised cooling units to rear elevation:

According to the manufacturer's data sheet provided, the source noise level of each proposed cooling unit is 52dBA @ 1m and as I understand there are 4 units but only 2 of them will be operational at anytime.

However, as a worst case scenario, the assessment has been conducted assuming that all 4 units are in operation simultaneously.

Hence the total noise from the units will be:
4 cooling units at 52 dBA@1m \approx 58 dBA@1m

Distance attenuation at 9m at the windows to the rear of 63 Lincoln's Inn Fields:
 $58 \text{ dBA@1m} - (20 \times \log 9) \approx 39 \text{ dBA}$ at the façade of the rear building
 $39 \text{ dBA} + 3 \text{ dBA}$ (façade reflection) $\approx 42 \text{ dBA}$

According to the BS4142, if:

- the noise contains a distinguishable, discrete, continuous note (whine, hiss, screech, etc.);
- the noise contains distinct impulses (bangs, clicks, clatters, or hums);
- the noise is irregular enough to attract attention.

then a further 5 dBA needs to be considered:

$42 \text{ dBA} + 5 \text{ dBA} = 47 \text{ dBA}$

As can be seen at a worst case scenario the noise level from the units at the façade of the nearest receptor will not exceed 47 dBA. This is a difference of -15 dBA with the lowest background LA90 recorded at the rear of the RCR building. According to the BS4142 this level of difference is a positive indication that complaints are unlikely. Also, this level of difference satisfies Camden Council's EHO's specification of 5dBA below the prevailing background at the nearest sensitive receptor.