

Addendum to Noise Impact Assessment – Air Source Heat Pumps

As part of the Government's "Net Zero" strategy, air source heat pumps (ASHPs) are being promoted to provide space and water heating in the UK, particularly for new-build developments. Unlike domestic gas boilers, ASHPs are typically located externally and, because they can produce some noise, there is potential for noise impact during the day and night.

The externally located ASHP unit includes a compressor and fan which operate intermittently on demand. A typical domestic ASHP (around 5kW) is relatively small in size and, when properly installed and maintained, generates fairly low levels of noise.

At this site, proposals are for Panasonic WH-MDC05J3E5 5kW ASHPs with a manufacturer's A-weighted source sound power level of 60 dB (which can also be denoted as 60 dB L_{wA}).

Considering the proposed position of the equipment (i.e. at ground level approximately 4m from the nearest neighbouring dwelling window), when corrections for directivity and the screening attenuation that will be provided by garden fences between properties are applied, the resulting noise level from any given ASHP outside the nearest neighbouring dwelling is likely to be no higher than 35 dB $L_{Aeq,T}$ (with a corresponding noise level inside the dwelling being no more than 25 dB $L_{Aeq,T}$). These are very low levels of noise that are well below both the corresponding external and internal noise criteria set out in British Standard 8233: 2014, '*Guidance on sound insulation and noise reduction for buildings*'. We therefore consider that there is very unlikely to be any significant associated noise impact.

Hepworth Acoustics