

ASHP Planning Guidance Note 2024

Heat pumps are an important part of the Government's strategy to reach net zero carbon emissions by 2050. However, the technology generates noise, and units often operate during the night and day. As a result, ASHP's have the potential to cause significant adverse effects to people living nearby, especially where residential dwellings are in close proximity. The location and installation of ASHP's should be considered with noise as a priority concern.

In certain circumstances ASHP installations may fall within 'Permitted Development rights' if they meet the Microgeneration Certification Scheme (MCS) standard. If the MCS Final Result exceeds the permitted development noise limit, they will be subject to a planning application.

Compliance with MSC does not necessarily mean noise from the ASHP will not have an adverse or significantly adverse impact at neighbouring properties. Should planning permission be required, evidence must be supplied to demonstrate the absolute rating level target in the guidance the Chartered Institute of Environmental Health (CIEH) and the Institute of Acoustics (IOA) have produced is complied with. This is a proportionate approach for installations where the MSC calculation is in exceedance of the Permitted Development Noise Limit.

When consulted on a planning application for an ASHP, we will ask that details of specific mitigation measures are provided that will achieve a maximum sound rating level of 35dB at any noise sensitive façade of neighbouring premises and are compliant with the CIEH/IOA guidance. Achievement of this target must be demonstrated using the CIEH/IOA calculation tool. The Rating Level is the sound level averaged over 15 minutes (LAeq,15mins) from the unit alone at both full duty and when in reverse mode plus adjustment for characteristics.

It is recommended that the CIEH/IOA guidance is followed when considering the installation of any ASHP whether or not full planning permission is required. Should complaints about noise nuisance from an ASHP be made to the local authority we would have a duty to investigate under the provisions of the Environmental Protection Act 1990 and serve an abatement notice when appropriate.

If appropriate noise mitigation measures are not proposed and proven to be effective using the CIEH/IOA calculator tool, we would need to see a comprehensive noise assessment based on BS 4142:2014+A1:2019 undertaken by an acoustic expert along with a design/mitigation scheme or must recommend refusal.

Guidance

[heat-pumps-briefing-note-professional-advice-note.pdf \(cieh.org\)](https://www.cieh.org/heat-pumps-briefing-note-professional-advice-note.pdf)

[Heat Pump Briefing Notes & Calculation Sheet by IOA & CIEH | Institute of Acoustics MCS-020.pdf \(mcscertified.com\)](#)

FAQ's

What if the MCS calculation is only 1dB over the permitted development noise limit?

A MCS Final Result above 42dB means that the application is unable to be considered under Permitted Development rights. We would stress that the 42dB set in the MSC is the

maximum permitted level and any deviation above this, no matter how small this may appear to someone who is not an acoustic expert, i.e. the 1dB in this case, is unacceptable. We also consider future neighbouring occupants, not just existing ones.

Can we re-do MCS calculation to achieve the threshold for permitted development?

Yes, if a comprehensive noise mitigation scheme is submitted alongside redone MSC calculation showing the installation can achieve $\leq 42\text{dB}$ the ASHP can be omitted from the planning application and be considered via permitted development.

Why is Wiltshire Council asking a stricter noise outcome for ASHP installations?

Unfortunately, compliance with the Microgeneration Certification Scheme (MCS) standard does not necessarily mean noise from the ASHP will not have an adverse or significantly adverse impact at neighbouring properties. There are three main reasons for this. Firstly, the calculation in the standard assumes a background noise level of 40dB LA90, many locations in Wiltshire would be significantly below this at night. Secondly the calculation used a sound measurement that takes no account of whether the unit being assessed is running at maximum capacity or during one of its noisier modes such as the 'defrost' mode. The calculation also takes no account of sound characteristics such as an audible hum, buzz or clunk which may make the sound more annoying.

When we are consulted on a planning application that includes ASHP installation, we will ask the applicant to aim for absolute rating level target that the Chartered Institute of Environmental Health (CIEH) and the Institute of Acoustics (IOA) have produced, which takes account of the sound character. This is considered a proportionate approach.

Is BS4142 an appropriate standard to apply to householder applications?

We recognise that BS4142 is often applied to larger scale developments. However, when MCS calculations predict an exceedance of the 42dB limit PD does not apply, and our Environmental Health team are able to require developers to aim for a better noise outcome. The CIEH has recommended this standard be applied, and we support this.

For example, if the ASHP rating level has been assessed by the applicant as 44dB at the nearest noise sensitive property and is likely to be $\sim 10\text{dB}$ higher than the background sound level at night it is therefore likely to result in a "significant adverse impact", as defined in BS4142, and give rise to complaints. The criteria for new plant generally required by Wiltshire Council is for a target of the rating level for new plant being least 5dB below background sound levels. The approach to ASHP's is therefore considered proportionate.