

Air Source Heat Pump Sound Calculation

The following is taken directly from Issue 1.1 of MCS 020 a) Planning Standards for permitted development installations of air source heat pumps (©The MCS Charitable Foundation 2025).

A copy of the following table must be completed for each assessment position tested (that could potentially be affected by noise from an air source heat pump) with results recorded in the 'result/notes' column for each step of the calculation procedure. Installation companies must retain one copy of the completed table for their records and provide another copy for the client.

This calculation is based on the input data highlighted in GREEN below. The customer must check that these details are correct, and inform Neighbourhood of any inaccuracies or if any of these details change. Failure to do so could result in non-compliance with MCS.

Date of assessment	25/09/2025	
Reference number	QR257490	
Site Address	6 Chaomans, Letchworth Garden City, SG6 3UB	
Description of the assessment position tested	9m from assessment position	
Heat pump model (unit 1)	HPA2040/16(13)	Refer to "Guidance on siting an Air Source Heat Pump" document for more details regarding the information highlighted in GREEN
Heat pump model (unit 2)		
Heat pump model (unit 3)		
Distance between heat pump and assessment position (m)	9	
Number of reflective surfaces within 1m of ASHP (including the ground)	2	
Barrier type between heat pump and assessment position	Open Fence, Hedge or No Barrier	
Line of sight between heat pump and assessment position	A solid barrier completely obscures the vision of the assessment position from the top or side edge of the heat pump, but moving a maximum of 25cm in any direction of the heat pump allows the assessment position to be visible.	

Result:



Based on the information entered above the air source heat pump installation WILL comply with MCS 020

The table below shows the full working for how the above result has been achieved:

Step	Instructions	Result
1	Date Calculation Undertaken	25/09/2025
2	Description of assessment position	9m from assessment position
3	From manufacturer's data, obtain the A-weighted sound power level of the heat pump	61dB(A)
4	Determine the directivity 'Q' of the heat pump noise	2 reflective surfaces - Q4
5	Measure the distance from the heat pump to the assessment position in metres.	9m
6	Determine any barrier corrections between the heat pump and the assessment position.	Open Fence, Hedge or No Barrier; Partial View
7	Calculate the sound pressure level from the heat pump at the assessment position.	36.9dB(A)
8	Is the calculated sound pressure level at the assessment position equal to or lower than the permitted development noise limit of 37.0dB(A)?	Yes

Planning Requirements:

Installations using a single ASHP may be eligible to be installed under Permitted Development. The installation must pass the MCS 020 calculation listed above, as well as complying with all other requirements of Permitted Development.

In England: Installations must comply with all points listed in Paragraph G of The Town and Country Planning Order (England), guidance can be found on Planning Portal: <https://www.planningportal.co.uk/permission/common-projects/heat-pumps/planning-permission-air-source-heat-pump>

In Wales: Installations must comply with the guidance listed on the Welsh Government Services and Information website: <https://www.gov.wales/planning-permission-heat-pumps>

In Scotland: Installations must comply with Class 6H of the Town and Country Planning Order (Scotland), guidance can be found on the Scottish Government website: <https://www.gov.scot/publications/householder-permitted-development-rights-guidance-updated-2021/pages/8/>

In all cases: if any requirements of Permitted Development cannot be met, then Planning Permission will be required. It is the responsibility of the customer to make sure all Planning requirements are met, if in any doubt the installation's Local Planning Authority should be contacted for clarification.