MCS 020 Planning Standard for Air Source Heat Pumps

The following is taken directly from Issue 1.2 of MCS 020 Planning Standards for permitted development installations of air source heat pumps on domestic premises (©DECC 2008).

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 Nu-Heat of any inaccuracies or if any of these details change. Failure to do so could result in non-compliance with MCS.

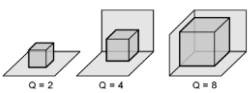
Date of assessment	20/01/2025
Reference number	QR248955
Site Address	37 Windsor Road, Worthing, BN11 2LZ
Description of the assessment position tested	In excess of 2 meters to the nearest neighbouring property.
Heat pump model (unit 1)	HPA2040/12(10)
Heat pump model (unit 2)	
Heat pump model (unit 3)	
Distance between heat pump and assessment position (m)	2
Number of reflective surfaces within 1m of ASHP (including the ground)	2
Barriers between heat pump and assessment postion	A solid barrier completely obscures the vision of the assessment position from the top or side edge of the heat pump. Moving 25cm in any direction of the heat pump does not allow the assessment position to be visible.

Refer to "Guidance on siting an Air Source Heat Pump" document for more details regarding the information highlighted in GREEN

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	*INSTALLER RESULTS / NOTES*	*INSTRUCTIONS*
1	STEP 1 RESULT = 57 dB(A)	From manufacturer's data, obtain the A-weighted sound power level of the heat pump. See 'Note 1: Sound power level'. The highest sound power level specified should be used (the power in 'low noise mode" should not be used).
2	STEP 2 RESULT = Q = 4	 Q2 = An ASHP installed with 1 reflecting surface (e.g. the ground) Q4 = An ASHP installed with 2 reflecting surfaces Q8 = An ASHP installed with 3 reflecting surfaces
3	STEP 3 RESULT = 2 m	Measure the distance from the heat pump to the assessment position in metres.
4	STEP 4 RESULT = -11 dB(A)	Use table in 'Note 4: dB distance reduction' to obtain a dB reduction.
5	STEP 5 RESULT = -10 dB(A)	Establish whether there is a solid barrier between the heat pump and the assessment position using 'Note 5: Barriers between the heat pump and the assessment position' and note any dB reduction. Selected option below: A solid barrier completely obscures the vision of the assessment position from the top or side edge of the heat pump. Moving 25cm in any direction of the heat pump does not allow the assessment position to be visible.
6	STEP 6 RESULT = 36 dB(A)	Calculate the sound pressure level (see 'Note 2: Sound pressure level') from the heat pump at the assessment position using the following calculation: (STEP 1) + (STEP 4) + (STEP 5).
7	STEP 7 RESULT = 40 dB(A)	Background noise level. For the purposes of the MCS Planning Standard for air source heat pumps the background noise level is assumed to be 40 dB(A) Lp. For information see 'Note 6: MCS Planning Standard for air source heat pumps background noise level'.
8	STEP 8 RESULT = 4 dB(A)	Determine the difference between STEP 7 background noise level and the heat pump noise level using the following calculation: (STEP 7) – (STEP 6)
9	FINAL RESULT = 42 dB(A)	Using the table in 'Note 7: Decibel correction' obtain an adjustment figure and then add this to whichever is the higher dB figure from STEP 6 and STEP 7. Round this number up to the nearest whole number.
10	Final result is less than or equal to 42 dB(A)? YES	Is the FINAL RESULT in STEP 9 equal to or lower than the permitted development noise limit of 42 dB(A)? If YES – the air source heat pump will comply with the permitted development noise limit for this assessment position and may be permitted development (subject to compliance with other permitted development limitations/conditions and parts of MCS 020 Planning Standard). Note – Other assessment positions may also need to be tested. If NO – the air source heat pump will not be permitted development. This installation may still go ahead if planning permission is granted by the local planning authority.