

MCS 020 - Planning Standards

Noise Assessment Calculations (Air Source Heat Pump)

Assessment Details

Pass

Site Reference: J.Patton 2

PROJECT DATE 04/11/2025	ASSESSMENT TYPE Single Heat Pump
MANUFACTURER Aira Group AB	MODEL HPO-AW-6-230V-1.0

Assessment Position

Position Description J.Patton 2	
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Sound Level Assessment Data

POSITION	HP NAME	SOUND POWER (DB)	DIRECTIVITY (Q)	DISTANCE (M)	BARRIER (DB)	FINAL LEVEL
P1	HP1	57	4	10	-5	29.53 PASS

Assessment Summary

Positions Assessed: 1 Positions Passed: 1 Compliance Rate: 100%	Pass Overall Result
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Position Images

Position 1



The HP is to be placed in a more secure position round the back of the property. This new location is more discreet and suitable for the customer. We estimate the location provides a distance similar to the original report. This new noise assessment also provided a much more accurate final decibel reading.

Position 2

N/A

Position 3

N/A

Position 4

N/A

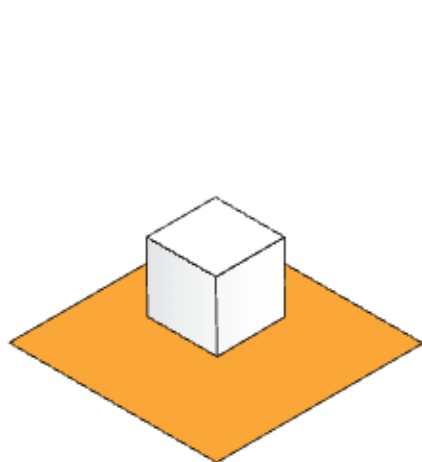
Assessment Criteria

- Sound Power: Manufacturer specification (dB)
- Distance: Measurement distance (metres)

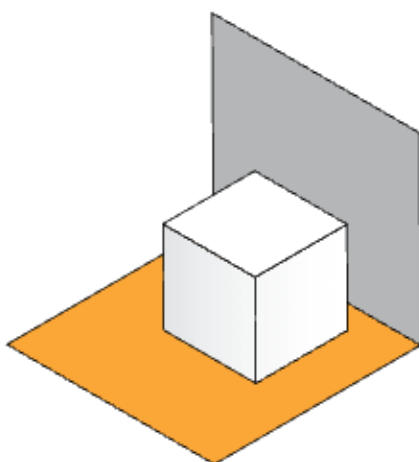
- Directivity: Reflected surface multiplier (Q)
- Barrier: Sound reduction from barriers (dB)

Final Level $\leq 37.1\text{dB}$ = PASS | Final Level $> 37.1\text{dB}$ = FAIL

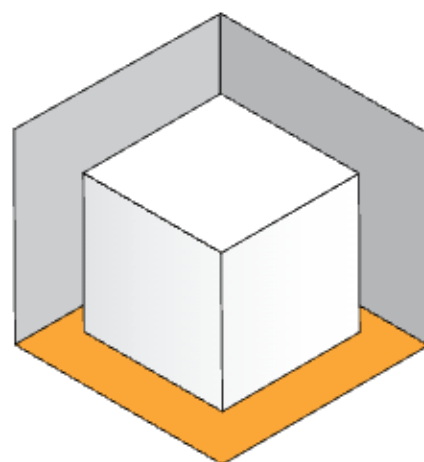
Barriers



Q = 2



Q = 4



Q = 8

Barriers

Is there a barrier between the heat pump and the assessment point?

A solid barrier (e.g, brick wall or fence) completely obscures the installers vision of the assessment position from the top edge of the ASHP

-10
dB

A solid barrier completely obscures the installers vision of the assessment position from the top or side edges of the ASHP, but moving a maximum distance of 25cm in any direction of the ASHP allows an assessment position to be seen

-5
dB

It is possible for the installer to see any part of an assessment position from the top or side of the ASHP

0
dB