



MCS 020(a) Permitted Development Noise Assessment Evidence

The Gables
Courtmead Road
Cuckfield
RH17 5Lp

October 2026

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1. Introduction

- 1.1. This document has been prepared to collate the MCS 020(a) sound calculation and the supporting site and manufacturer's information for the proposed air source heat pump (ASHP). It is intended to accompany the application for a Certificate of Lawfulness of Proposed Use or Development submitted to the Local Planning Authority.
- 1.2. The proposed outdoor unit is a Daikin 5MXM90A8 reversible air source heat pump, ground-mounted within the rear garden immediately adjacent to the existing brick garage wall.

2. MCS 020 (a) noise Calculation

- 2.1. The submitted MCS 020(a) calculation uses the manufacturer's nominal A-weighted sound power level of 64 dB(A), two reflective surfaces ($Q=4$), a 13 m distance to Assessment Position 1 and no barrier attenuation. The existing vegetation between the proposed ASHP and the assessment position has not been treated as an acoustic barrier.
- 2.2. On those submitted inputs, the calculation returns a sound pressure level of 36.7 dB(A) at Assessment Position 1, below the 37.0 dB(A) MCS 020(a) criterion.

Project Details (optional)				
Installation address		The Gables, Courtmead road, Cuckfield, RH17 5LP		
Heat pump make & model		Daikin 5MXM90A8		
Heat pump installation location		Behind garage in rear garden		

Step	Assessment Position 1	Assessment Position 2	Assessment Position 3	Assessment Position 4
1 Date calculation undertaken	05/10/2026			
2 Description of assessment position	Behind brick garage between the install dwelling and neighbouring property			
3 A-weighted sound power level, dB(A)	64			
4 Determination of directivity (Q) - select number of reflective surfaces	two reflective surfaces	two reflective surfaces	two reflective surfaces	one reflective surface
5 Distance from heat pump to assessment positions, in m	13			
6 Determination of barrier correction - select barrier type	vegetation	close board fence (<18mm thick boards)	close board fence (<18mm thick boards)	close board fence (<18mm thick boards)
7 Determination of barrier correction - select line of sight	partial view	partial view	no view	no view
7 Calculate sound pressure level	36.7	#DIV/0!	#DIV/0!	#DIV/0!
8 Pass/fail noise limit of 37.0 dB(A)	pass	#DIV/0!	#DIV/0!	#DIV/0!

- 2.3. The 13 m distance above is the distance recorded on the submitted drawing P003 and used in the supplied calculation.

3. Assessment Position & Proposed Location

- 3.1. Assessment Position 1 is identified in the submitted evidence as the nearest relevant neighbouring habitable-room window. Drawing P003 shows the proposed ASHP position and records the assessment distance as 13 m.
- 3.2. The proposed outdoor unit is located at ground level in the rear garden, immediately adjacent to the existing brick garage wall, approximately 250-500 mm from that wall.





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4. Site photographs

- 4.1. The photographs below record the proposed installation area. They show the existing brick garage wall adjacent to which the outdoor unit is proposed, together with the existing garden vegetation and surrounding context. No acoustic attenuation is claimed for the vegetation.



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5. Manufacturer's Technical Evidence

- 5.1. The manufacturer's technical information supplied with the application identifies the Daikin 5MXM90A8 outdoor unit and records a nominal sound power level of 64 dB(A). This is the sound-power input used in the submitted MCS 020(a) calculation.



Multi model application • 5MXM-A8

2 Specifications

2 - 1 Specifications

Technical specifications					5MXM90A8	
Refrigerant	Charge		tCO2Eq		1.62	
Casing	Colour				Ivory white	
Dimensions	Unit	Height	mm		734	
		Width	mm		974	
	Packed unit	Depth	mm		408	
		Height	mm		820	
		Width	mm		1,050	
		Depth	mm		480	
Weight	Unit	kg		68		
	Packed unit	kg		73		
Heat exchanger	Length		mm		920	
	Rows	Quantity		2		
				1.40		
	Stages	Quantity		32		
				6.00		
	Passes		Quantity		6.00	
	Tube type				Hi-XA	
	Tube diameter		mm		7.0	
	Fin	Type			WHS8 FIN-HYDROPHILIC	
		Treatment			Anti-corrosion treatment	
Heat exchanger 2	Quantity				1	
	Length		mm		650	
	Rows	Quantity		1		
				2		
	Fin pitch		mm		12	
Fan	Type				Propeller fan	
	Discharge direction				Horizontal	
	Quantity				1	
	Air flow rate	Cooling	High	m³/min	49.1	
				cfm	1,734	
			Medium	m³/min	49.1	
		cfm		1,734		
		Low	m³/min	24.1		
			cfm	851		
	Heating	High	m³/min	50.4		
			cfm	1,780		
			m³/min	50.4		
		Medium	m³/min	1,780		
			cfm	24.1		
			Low	m³/min	851	
Fan motor	Quantity				1	
	Model				D90B-37	
	Output		W		128	
	Speed	Cooling	High	rpm	800	
			Medium	rpm	800	
			Low	rpm	420	
		Heating	High	rpm	820	
			Low	rpm	420	
			Medium	rpm	820	
	Compressor	Quantity				1
Model				2YC71DXD#C		
Oil Amount		cm³		900		
Type				Hermetically sealed swing compressor		
Output		W		2,400		
Oil Type				FW68DA		
Operation range	Cooling	Ambient	Min.	°CDB	-10	
			Max.	°CDB	50	
	Heating	Ambient	Min.	°CDB	-20	
			Max.	°CDB	24	
Sound power level	Cooling	Nom.		dB(A)	64	
	Heating	Nom.		dB(A)	64	
Sound pressure level	Cooling	Nom.		dB(A)	52	
	Heating	Nom.		dB(A)	52	
Refrigerant	Type				R-32	
	Charge		kg		2.40	
	Charge		tCO2Eq		1.62	
	Control				Expansion valve	
	GWP				675	



6. Conclusion

- 6.1. The manufacturer's nominal sound power level of 64 dB(A) supports the sound-power input used in the submitted MCS 020(a) calculation. Using $Q=4$, a 13 m distance to Assessment Position 1 and no barrier attenuation, the submitted calculation gives 36.7 dB(A), below the 37.0 dB(A) criterion.
- 6.2. The proposed outdoor unit, its rear-garden position immediately adjacent to the existing brick garage wall, the surrounding site context and the manufacturer's technical information are recorded in this evidence and the accompanying planning drawings.

