

Lawful Development Certificate - Proposed Use/Development

6 Mayfields, Sindlesham, Wokingham, RG41 5BY

[REDACTED]

Thank you for confirming that I may submit an application for a Lawful Development Certificate under Class G.

The proposed development comprises two outdoor air-source heat-pump units: one Samsung EHS Mono R290 8 kW outdoor unit and one Daikin 5MXM90A2V1B9 R32 multi-split inverter outdoor unit.

The Samsung unit is proposed to be ground-mounted in the position shown on the drawings. The Daikin unit is proposed to be wall-mounted on the left-side elevation at approximately 3.0 metres above ground level, in the position shown on the proposed plans and elevations.

Please find enclosed the existing and proposed floor plans and elevations, site and location plans, manufacturer information and supporting MCS 020(a) style noise assessment.

I would be grateful if the application could be assessed under Schedule 2, Part 14, Class G of the Town and Country Planning (General Permitted Development) (England) Order 2015, as amended.

Kind regards,

Ziya Khan

Supporting Statement - Two-Unit LDC Proposal

1. Proposed development

The proposal is for two external air-source heat-pump outdoor units serving a detached dwellinghouse. No internal building alterations form part of this proposal.

2. Equipment

HP1 - Samsung EHS Mono R290 8 kW, model AE080CXYDEK/EU. Dimensions: 998 mm wide x 850 mm high x 500 mm deep. Proposed ground-mounted position as shown on the drawings.

HP2 - Daikin 5MXM90A2V1B9 R32 multi-split inverter outdoor unit. Nominal capacity: 9.0 kW cooling / 10.0 kW heating. Dimensions: 958 mm wide x 734 mm high x 340 mm deep. Weight: 68 kg. Proposed wall-mounted position on the left-side elevation at approximately 3.0 metres above ground level.

3. Basis of application

The application seeks formal confirmation that the proposed two-unit installation is lawful as permitted development under Class G, subject to all applicable conditions.

4. Drawings

The accompanying drawings show the existing dwelling and the proposed positions of HP1 and HP2. The internal floor layouts of the dwelling are unchanged.

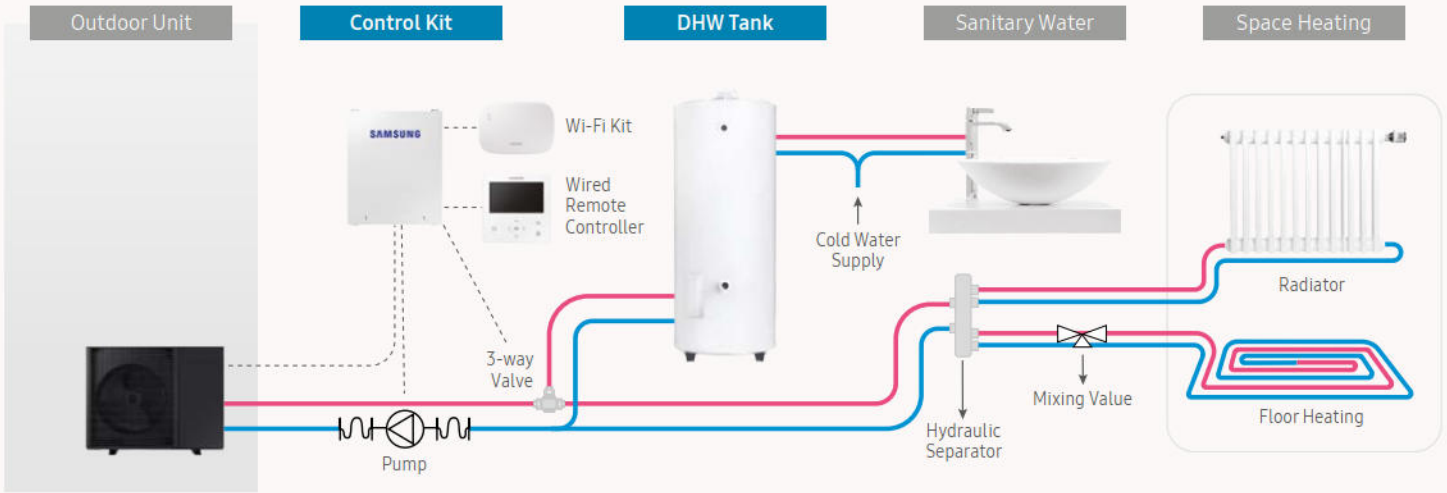
5. Noise and MCS Planning Standards

A supporting MCS 020(a) style noise assessment is included. It uses the measured receptor distances supplied by the applicant and published manufacturer sound-power data. Both units calculate below the 37.0 dB(A) permitted-development limit on the stated assumptions.

6. Siting and appearance

HP1 is ground-mounted. HP2 is wall-mounted on the left-side elevation at approximately 3.0 metres above ground level. The proposed locations are shown on the submitted plans and elevations.





Samsung EHS Mono R290 8kW AE080CXYDEK/AE080CXYDGK

Global Warming Potential (GWP) of 3

The EHS Mono R290 can be used with the Samsung ClimateHub or connected to third party equipment such as a Domestic Hot Water (DHW) Tank thanks to the Samsung Mono control kit.



Outdoor Unit		Indoor Unit	Control/Interface			
						
5.0/8.0kW (R290)	12.0/16.0kW (R290)	ClimateHub (200/260L)	Mono Control Kit	Wi-Fi Kit	Wired Remote Controller	DMS2.5

Specifications

		AE080CXDEK		AE080CXDGK
Capacity				
Capacity*	Heating (A7/W35)	kW	8.0	8.0
Performance				
Leaving Water Temperature	Heating	°C	15-75	15-75
Efficiency	SCOP Class (35°C)		A+++	A+++
	SCOP Class (55°C)		A++	A++
Sound Pressure**	Normal	dB(A)	45	45
	Quiet Mode	dB(A)	35	35
Operating Temperature Range	Heating	°C	-25~35	-25~35
Electrical Data				
Power Supply		Φ, V	1Φ, 2Line, 220~240V, 50Hz	3Φ, 4Line, 380~415V, 50Hz
Refrigerant				
Refrigerant Type			R290 (GWP=3)	R290 (GWP=3)
Water Pipe	Inlet/Outlet	mm	BSP male 1"/BSP male 1"	BSP male 1"/BSP male 1"
Dimensions				
Net Dimensions	W x H x D	mm	998 x 850 x 500	998 x 850 x 500

The available line-up, including capacities and models, may vary by region. Features and specifications are subject to change without notice.

* A2W Condition: (Heating) Water In/Out 30°C/35°C, Outdoor Air 7°C [DB] /6°C [WB]; Outdoor Air 35°C [DB].

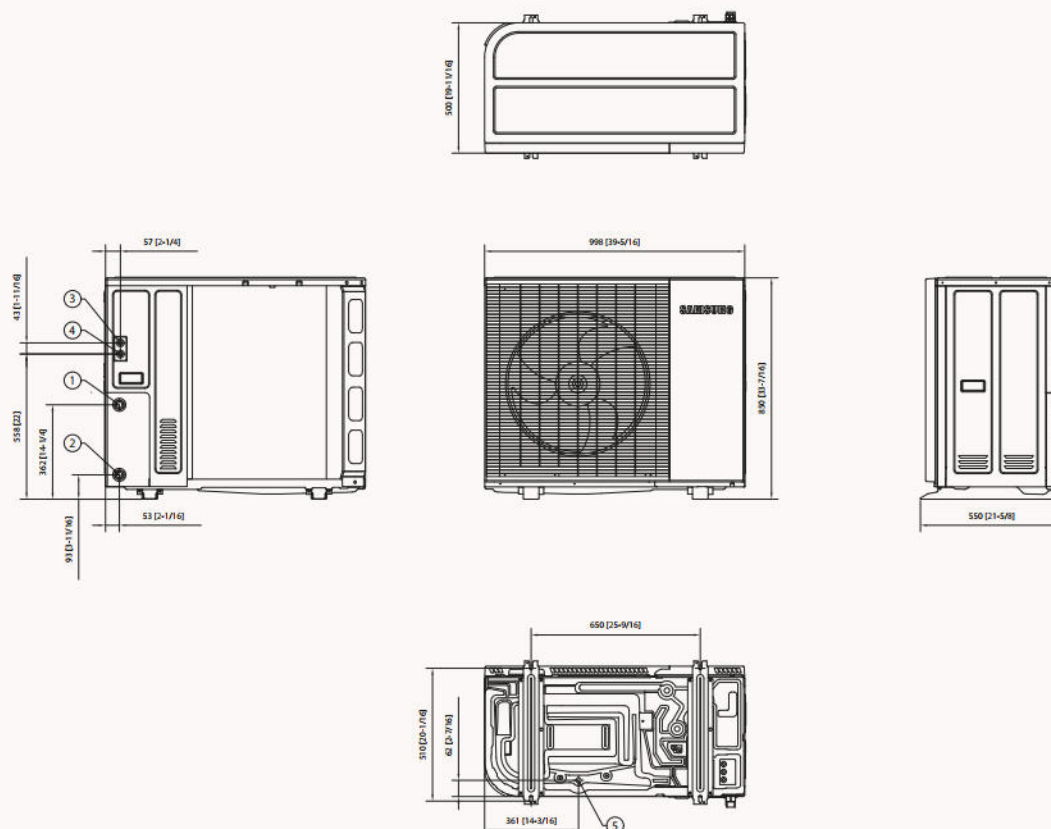
** Sound pressure level is obtained in an anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. Sound pressure level may differ depending on operation conditions.



PV enabled & Smart Grid Ready

It optimises the self-consumption of electricity produced by photovoltaic panels.

Connection is already prepared on the hydronic modules and in the ClimateHub and Samsung EHS systems.



DAIKIN 5MXM90A2V1B9 - TECHNICAL SUMMARY

Planning-relevant data from installer-supplied Daikin A9 documentation

Exact outdoor model	5MXM90A2V1B9
Product type	R32 multi-split inverter outdoor unit
Nominal cooling capacity	9.0 kW
Nominal heating capacity	10.0 kW
Power supply	1 phase, 220-240 V, 50 Hz
Dimensions	734 H x 958 W x 340 D mm
Approx. unit volume	0.239 m ³
Weight	68 kg
Sound pressure - cooling	52 dB(A), nominal
Sound power - cooling	64 dB(A)
Refrigerant	R32
Factory refrigerant charge	2.40 kg
Maximum connected indoor units	5

Proposed installation

Wall-mounted on the left-side elevation at approximately 3.0 metres above ground level, in the same location shown on the submitted LDC drawings.

Manufacturer documentation

The installer-supplied Daikin declarations identify model 5MXM90A2V1B9 within the 2MXM/3MXM/4MXM/5MXM A9 series. The supplied MXM-A9 product sheet gives the planning-relevant dimensional, capacity and acoustic data used above.

MCS 020(a) STYLE NOISE ASSESSMENT - TWO-UNIT LDC PROPOSAL

Property: 6 Mayfields, Sindlesham, Wokingham, RG41 5BY

Assessment basis

This calculation follows the MCS 020(a) Issue 1.1 methodology. The permitted-development noise limit is 37.0 dB(A) at the assessment position, taken 1 metre externally from the centre of the nearest neighbouring habitable-room window or door. Sound power data is used.

Calculation equation

$$L_p = L_w + 10 \log_{10} [Q / (4 \pi r^2)] - AB$$

No acoustic barrier correction has been claimed in either calculation.

HP1 - Samsung EHS Mono R290 8 kW (AE080CXYDEK/EU)

Manufacturer sound power L_w	59 dB(A)
Directivity Q	4
Horizontal distance to neighbour window	8.0 m
Assessment-point horizontal distance	7.0 m
Working vertical difference	4.0 m
Straight-line distance r	8.1 m
Barrier correction AB	0 dB
Calculated level L_p	35.9 dB(A)
MCS limit	37.0 dB(A)
Result	PASS - margin 1.1 dB

HP2 - Daikin 5MXM90A2V1B9 R32 multi-split outdoor unit

Manufacturer sound power L_w	64 dB(A)
Directivity Q	2 (wall-mounted off ground against one wall)
Nearest neighbouring habitable-room window	30.0 m
Assessment-point distance r	29.0 m
Barrier correction AB	0 dB
Calculated level L_p	26.8 dB(A)
MCS limit	37.0 dB(A)
Result	PASS - margin 10.2 dB

Sensitivity check

If the more conservative Q_4 directivity were applied to HP2, its calculated level at 29.0 m would be approximately 29.8 dB(A), still well below the 37.0 dB(A) limit.

Conclusion

On the stated site distances and assumptions, HP1 calculates to 35.9 dB(A) and HP2 to 26.8 dB(A). Both are below the MCS 020(a) permitted-development limit of 37.0 dB(A). No acoustic barrier attenuation has been relied upon.

Verification note

The final installer/MCS contractor should verify the precise assessment-point distances, reflecting surfaces/directivity and final installation geometry on site. The 4.0 m vertical difference used for HP1 is carried over from the earlier site measurement and should be checked against the final installed unit centre and neighbouring window centre.



WI-FI ADAPTOR

AVAILABLE AS
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Connectable Indoor Units	Wall mounted																	Floor Standing						Roundflow cassette	Fully flat cassette	Concealed ceiling						Ceiling suspended	Concealed floor standing													
	FTXJ-M W/S				C/FTXA-AW/BS/ BT/BB				C/FTXM-R					FTXP-M9			C/FVXM-A			FVXM-F			FCAG-B			FFA-A9			FDXM-F9			FBA-A9			FHA-A9			FNA-A9								
	20	25	35	50	15	20	25	35	42	50	60	71	20	25	35	20	25	35	50	25	35	50	35	50	60	25	35	50	60	25	35	50	60	35	50	60	35	50	60	25	35	50	60			
2MXM40N9	●	●	●		●	●	●	●					●	●	●	●	●	●	●		●	●								●	●											●	●			
2MXM50N9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	●	●	●	●	●	●										●	●	●	
2MXM68N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3MXM40N7	●	●	●		●	●	●	●					●	●	●	●				●	●	●					●	●		●	●			●				●			●	●				
3MXM52N7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3MXM68N9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4MXM68N9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4MXM80N9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
5MXM90N9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Notes:

2MXM40-50N9 and 3MXM40-52N7 can reduce the sound power by 6dB(A) if combined with Emura (FTXJ-M W/S), Stylish (FTXA-AW/BS/BT/BB) or Perfera (FTXM-R) indoor units

R-32 BLUEEVOLUTION

MXM-M / M9 / N

Multi Series Inverters



Accessories:

Accessory Ref	Description	Trade Price
K.CWB140-2	Wall bracket (140kg, 540mm support arm)	
K.CWB90-2	Wall bracket (90kg, 500mm support arm)	
K.DT1	Condensate drip tray for use with K.CWB90-2	
K.DT2	Condensate drip tray for use with K.CWB140-2	
K.CGM	Condensing unit guard size (1150 x 1150 x 650)	

Outdoor Units			2MXM40N9	2MXM50N9	2MXM68N	3MXM40N7	3MXM52N7	3MXM68N9	4MXM68N9	4MXM80N9	5MXM90N9
Capacity	Nominal Cooling	kW	4.0	5.0	6.8	4.0	5.2	6.8	6.8	8.0	9.0
	Nominal Heating	kW	4.2	5.6	8.6	4.6	6.8	8.6	8.6	9.6	10.0
Dimensions	Height x Width x Depth	mm	550 x 765 x 285	550 x 765 x 285	734 x 958 x 340	734 x 974 x 401	734 x 974 x 401	734 x 958 x 340	734 x 958 x 340	734 x 958 x 340	734 x 958 x 340
Weight		kg	36	41	60	57	57	62	63	67	68
Electrical Details	Power Supply	Phase	1ph	1ph	1ph	1ph	1ph	1ph	1ph	1ph	1ph
		Hz	50	50	50	50	50	50	50	50	50
		V	220-240	220-240	220-240	220-240	220-240	220-240	220-240	220-240	220-240
	Maximum Input Current (MCA)	A	9.8	12.94	16.94	14.31	14.59	17.19	17.36	17.04	21.7
	Max Fuse Size	A	16	16	20	16	20	20	20	25	32
Refrigerant Circuit	Refrigerant Type		R32	R32	R32	R32	R32	R32	R32	R32	R32
	Refrigerant Charge	kg	0.88	1.15	2.00	1.80	1.80	2.00	2.00	2.40	2.40
Sound Pressure (Cooling)	Nom	dBA	46	48	48	46	46	48	48	48	52
Sound Power (Cooling)		dBA	60	60	61	59	59	61	61	61	64
Piping Limits	Max. Length (OU- IU)	m	20	20	25	25	25	25	25	25	25
	Max. Level Difference (IU- IU)	m	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
	Max. Level Difference (IU- OU)	m	15	15	15	15	15	15	15	15	15
	Total piping length (Actual)	m	30	30	50	50	50	50	60	70	75
Piping Connections	Liquid	inches (mm)	2x 1/4 (6.4)	2x 1/4 (6.4)	2x 1/4 (6.4)	3x 1/4 (6.4)	3x 1/4 (6.4)	3x 1/4 (6.4)	4x 1/4 (6.4)	4x 1/4 (6.4)	5x 1/4 (6.4)
	Gas	inches (mm)	2x 3/8 (9.5)	1x 3/8 (9.5)	1x 3/8 (9.5)	1x 3/8 (9.5)	1x 3/8 (9.5)	1x 3/8 (9.5)	2x 3/8 (9.5)	3/8 (9.5)	2x 3/8 (9.5)
				1x 1/2 (12.7)	1x 1/2 (12.7)	2x 1/2 (12.7)	2x 1/2 (12.7)	2x 1/2 (12.7)	2x 1/2 (12.7)	1x 1/2 (12.7)	1x 1/2 (12.7)
										2x 5/8 (15.9)	2x 5/8 (15.9)
Operating range (Cooling)	Min / Max	°CDB	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46
Operating range (Heating)	Min / Max	°CWB	-15 / 18	-15 / 18	-15 / 18	-15 / 18	-15 / 18	-15 / 18	-15 / 18	-15 / 18	-15 / 18
Number of Connected Indoor Units			2	2	2	3	3	3	4	4	5
Air Flow Rate (Cooling)	Nom	m³/sec	0.550	0.567	0.708	0.700	0.700	0.708	0.708	0.753	0.817

UKCA – Ecodesign declaration of conformity

Daikin Industries Czech Republic s.r.o.

declares under its sole responsibility that the products to which this declaration relates:

2MXM40A2V1B9, 2MXM50A2V1B9, 2MXM68A2V1B9, 3MXM40A2V1B9, 3MXM52A2V1B9, 3MXM68A2V1B9, 4MXM68A2V1B9, 4MXM80A2V1B9, 5MXM90A2V1B9,

are in conformity with the following directive(s) or regulation(s), as amended:

S.I. 2020/1528:The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2020,			
Commission regulations:			
Airconditioning	(EU)	206/2012	(*)

and comply with the following standard(s) or other normative document(s):

BS EN 14825,

* Official approved combination(s) can be found in the product catalogue(s).