

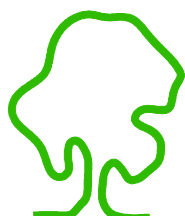
31st GRAVESEND ST AIDENS SCOUT HUT

HAMPTON CRESENT, GRAVESEND, DA12 4HZ



Noise Management Plan

April 2026



eas ltd

Environmental Assessment Services Ltd

REPORT DATA SHEET

Requirement	Data
Report Reference	908/YouthHubs/31stGravesendStAidensScoutHut/NMP
Date	April 2026
Client	Wernick Buildings
Report type	Noise Management Plan
Purpose	Planning Condition
Revisions	-
Prepared by	Xanthe Lyford BSc (Hons)  Signed
Approved by	Malcolm McKemey Eur Ing Malcolm McKemey BSc (Hons), CEng, CEnv, MICE, MCIWEM, MIEEnvSc  Signed

31st GRAVESEND ST AIDENS SCOUT HUT

HAMPTON CRESCENT, GRAVESEND, DA12 4HZ

Noise Management Plan

April 2026

Revision No.	Date	Originator	Checker	Company Approver	Description of Changes
1	April 2026	Xanthe Lyford	Malcolm McKemey	Wernick Buildings	Additional information

1. SITE DETAILS

- 1.1 Site name: 31st Gravesend St Aidens Scout Hut
- 1.2 Site Address: Hampton Crescent, Gravesend, DA12 4HZ
- 1.3 Proposed Development: Scout Hut (youth hub)

2. WHO IS THE PLAN FOR

- 2.1 The plan is for Wernick Buildings, 31st Gravesend St Aidens Scout Group, the Environment Agency and the site manager.

3. DOCUMENT OWNER

- 3.1 The Document Owner is Wernick Buildings & 31st Gravesend St Aidens Scout Group
- 3.2 The Document Author is Xanthe Lyford, BSc (Hons)
- 3.3 List of revisions

Revision No.	Revision authorised by	Date Submitted to the Environment Agency	Revision owner

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31st GRAVESEND ST AIDENS SCOUT HUT

HAMPTON CRESCENT, GRAVESEND, DA12 4HZ

Noise Management Plan

April 2026

1. INTRODUCTION

1.1 Site description

The site is currently used as a scout hut, and the proposed building is to be on the footprint of and slightly larger than the existing building. It is accessed from Hampton Crescent via a gate, with a concrete parking area to the east. The rest of the plot is laid to grass with some established shrubs and trees to the east of the plot. The site lies in a residential area and is bordered to the north by 168 Hampton Crescent, a semi-detached property with garden, to the east by the public highway, Hampton Crescent with a block of flats on the far side of the road, to the south by the public highway, St Benedict's Avenue with The Vicarage, a detached residence with garden on the far side, and to the west by a block of flats with rear yards facing the site, 50-80 St Benedict's Avenue. The Ordnance Survey reference for the site is TQ 66099 72644, and the site elevation is approximately + 23.7 m AOD. The total site area is approximately 0.06 Ha.

It is proposed to redevelop the site by the demolition of the existing building and the construction of a replacement community building (youth hub) on the plot of the existing 31st Gravesend, St Aidens Scout Hut, to the northwest of the junction between St Benedict's Avenue and Hampton Crescent. See Figure 1 for the site plan and receptor locations.

The Current site usage comprises Beavers (Tuesday 18:00 - 19:30), Squirrels (Wednesday 17:00 -18:00), Scouts (Wednesday 19:30 - 21:00), Cubs (Thursday 18:00 - 19:30). The hours of use of the proposed building may vary post development but will remain during the after-school and early evening hours on weekdays (17:00-21:00) and occasionally weekend use. There are no plans to operate specific items of plant/equipment at different times of day.

Environmental Assessment Services Ltd has been commissioned to complete this noise management plan to satisfy condition 7 of Gravesend Borough Council local planning authority which states:

“Prior to the operation of any plant/equipment associated with the use, a noise impact assessment shall be carried out and submitted to the LPA for approval demonstrating that: The rating noise from fixed building services/mechanical plant/equipment, including any air systems, associated with the development shall be at least 10dB below the existing LA90 background level at the nearest noise sensitive receptors (i.e. dwellings) when measured and assessed in accordance with BS4142:2014+A1:2019.”

The plant/equipment at the proposed site includes three, wall mounted, low energy consumption, air cooling units on the east and south elevations of the building, two compact roundflow cassette, air discharge units on the western elevation and two internally located heat recovery ventilation system units with external vents on the northwest corner of the building and the southern elevations.

1.2 Maintenance and review of the NMP

Maintenance and review of the NMP will be the responsibility of 31st Gravesend St Aidens Scout Group/the site manager.

The plan will be stored by Wernick Buildings, with a copy kept by the 31st Gravesend St Aidens Scout Group on site.

The plan is to be reviewed annually and additionally should any change be made to the make and model of the plant at the site.

1.3 Relevant sector guidance on which the NMP is based.

The relevant sector guidance on which the NMP is based comprises:

Environment Agency NMP Template (V1 2022)

Environment Agency Noise and Vibration Management: environmental permits (2022)

Method implementation documentation (MID) for BS 4142 (2023)

2. RECEPTORS

2.1 Receptor List

The sensitive receptors and the distances from the noise sources are given in Table 2.1 below and the locations are shown on Figure 1. It should be noted that the distances are from the locations of the ventilation equipment on the floor plans and not the edge of the proposed building itself.

TABLE 2.1

No.	Receptor	Distance and direction from the nearest ventilation equipment	Existing potential attenuation to noise
1	Residential receptors at 168 Hampton Crescent	10.14 m north of the building	2 m wooden slat fence and 2 m brick wall
2	Residential receptors at the flats in St Gregorys Court	28.00 m east of the building	Hampton Crescent public highway
3	Residential receptors at The Vicarage	27.31 m south of the building	Wooden slat fence 2 m and foliage in the garden of the receptor dwelling
4	Residential receptors at 50-80 St Benedicts Avenue	19.12 m west of the building	Sloping bank and 2 m brick wall with wooden gate to the receptor's yards

3. NOISE SOURCES AND PROCESSES

3.1 Noise Impact Assessment (NIA) conclusions:

The Noise Policy Statement for England (NPSE) states that sustainable development should:

- i. Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- ii. Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- iii. Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

It should be acknowledged that the proposed redevelopment of the Scout Hut is intended to be beneficial for local community.

The 2024 noise impact assessment did not predict any significant change in the noise produced by the use of the building by children compared with the existing scenario. However, the impacts of the plant and air conditioning units may be heard at the neighbouring residential receptors.

The adverse impacts may be reduced by:

- i. Hedge planting on the boundary fences between the building and the residential receptors. This could reduce the noise from the site by approximately 2.7 dB_(A) (*Hedgelink UK*).
- ii. Using the quietest available plant and air conditioning units.
- iii. Orientating the external vents and air conditioning units so that the quietest elevation faces towards the sensitive receptors.

3.2 Noise Sources

The noise sources comprise three, wall mounted, low energy consumption, air cooling units on the east and south elevations of the building, two compact roundflow cassette, air discharge units on the western elevation and two internally located heat recovery ventilation system units with external vents on the northwest corner of the building and the southern elevations. The noise sources, their locations and noise emissions are given in Table 3.1 below:

TABLE 3.1
NOISE SOURCES PLANT/EQUIPMENT

Item of plant / equipment	Location	Sound Power Level (dB_(A))	Sound Pressure Level @10 m (dB_A)
Daikin low energy consumption air cooling units (RXP20N9)	East and south elevations of building	60	47
Daikin compact roundflow cassette air discharge units (RXM50A8)	West elevation of building	62	49
Daikin heat recovery ventilation units (VAM 1000J)	Northwest corner and southern elevation of building		24
Solax X1 – Boost G4 Inverter for solar panels	Eastern façade of building		25

3.3 Overview of noise processes and emissions.

Noise emissions will largely come from the operation of the mechanical ventilation system external units located on the east, south and west elevation of the building, facing towards the residential receptors in St Gregory's Court, The Vicarage and St Benedicts Avenue respectively. See Figure 2 for a plan showing the location of the external plant/equipment.

4. CONTROL MEASURES AND PROCESS MONITORING

4.1 Appropriate measures/Best available techniques

To reduce noise impacts at the neighbouring residential receptors, models of ventilation systems with a quiet noise output have been chosen. See Table 3.1 above for a list of the ventilation systems to be installed in the proposed building.

The Noise Management Plan will be re-evaluated yearly and additionally should any of the plant/equipment be replaced with different models.

4.2 Onsite monitoring processes

Initial noise monitoring was carried out at the site in September 2024 with a continuous monitoring at the west of the site, with the microphone 3 m above the ground with a line of sight to the rear facades of the residences in St Benedict's Avenue, and additional short-term monitoring at the approximate location of the eastern facade of the proposed building. This established the ambient and background sound levels for the site for use in the BS 4142 Noise Impact Assessment (NIA). The background noise level at the

existing site LA90 was recorded at an average of 47.25 dB_(A). See Figure 3 for the locations of the previous noise monitoring.

The path difference due to distance from the nearest ventilator equipment on the building to the corresponding nearest residential receptor is shown below:

Receptor 1 (168 Hampton Court)

Noise at nearest ventilator source ($L_{(A)eq}$) = 49 dB_(A)

Attenuation due to distance = $20 \log(19.12) + 8 = 33.63$ dB

Noise level at receptor from equipment = $49 - 33.63 = 15.37$ dB_(A)

Receptor 2 (St Gregory's Court)

Noise at nearest ventilator source ($L_{(A)eq}$) = 47 dB_(A)

Attenuation due to distance = $20 \log(27.31) + 8 = 36.73$ dB

Noise level at receptor from equipment = $47 - 36.73 = 10.27$ dB_(A)

Receptor 3 (The Vicarage)

Noise at nearest ventilator source ($L_{(A)eq}$) = 49 dB_(A)

Attenuation due to distance = $20 \log(28.00) + 8 = 36.94$ dB

Noise level at receptor from equipment = $49 - 36.94 = 12.06$ dB_(A)

Receptor 4 (50-80 St Benedict's Avenue)

Noise at nearest ventilator source ($L_{(A)eq}$) = 49 dB_(A)

Attenuation due to distance = $20 \log(10.14) + 8 = 28.12$ dB

Noise level at receptor from equipment = $49 - 28.12 = 20.88$ dB_(A)

The nearest residential receptors on all sides will receive noise impacts from the closest ventilation equipment at a noise level more than 10 dB_(A) quieter than the average LA90 background noise level of 47.25 dB_(A), as stipulated by condition 7 of the decision notice.

Onsite processes to ensure impacts do not increase on site are given in Table 4.1 below:

TABLE 4.1

Description of procedure	Procedure	When will this be carried out	Corrective action
Replacing old/faulty equipment	Procurement of new/replacement equipment	When equipment requires replacing	Replace equipment with quieter types, where available
Ensuring any acoustic enclosures on plant/equipment are kept closed.	Monthly inspection and remedy, if required.	Monthly	Close up enclosures where found to be left open.

Equipment will be replaced when, due to wear or failure, the noise level generated exceeds that for equipment in a good state of maintenance and/or repair.

5 COMPLAINTS REPORTING

5.1 Reporting and recording of complaints.

The site users (31st Gravesend St Aidens Scout Group) will provide a log giving the date and origin of the complaint, the nature of the complaint, the responsibility for responding to the complaint and whether a response has been initiated. See Appendix A.

5.2 Investigating complaints.

On receipt of a complaint, and having logged the complaint as described above, the site manager (scout group) will investigate the complaint with regard to the origin, validity and seriousness of the complaint.

5.3 Notification of the EA

Where a noise complaint is, in the opinion of the site manager (scout group), neither trivial and/or can be addressed simply and immediately, it will be reported to the Environment Agency for further advice.

5.4 Remedial Action

A complaint may be considered resolved where the remedial action carried out by the site manager results in the complainant agreeing that the reason for the complaint has been expunged, or the Environment Agency has accepted that the remedial action has satisfied the complaint.

5.5 Responding to complaints.

Responding to complaints will be the responsibility of the site manager (scout group). All complaints should be responded to as they may be an indication that the noise management regime is inadequate and requires improvement.

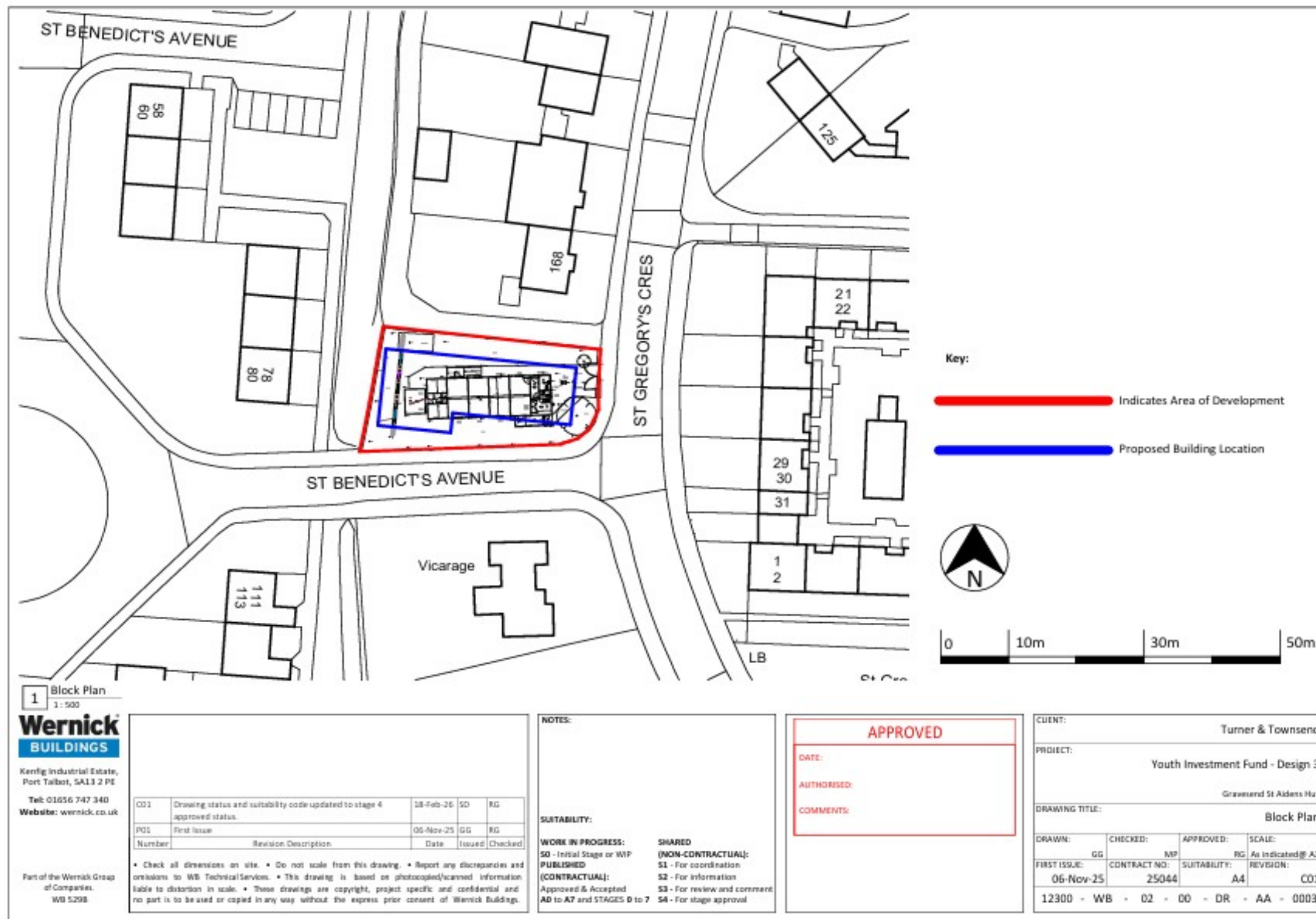
5.6 Feedback to complainants and the EA.

When remedial measures have been carried out, the site manager will report back to the complainant to discover whether the complainant is satisfied that the reason for the complaint has been expunged. Where a complaint has been reported to the EA, the site manager will contact the EA confirming the remedial action taken and any response from the EA.



FIGURES

- Figure 1: The Site and Receptor Locations.
Figure 2: Floor Plan showing the location of the external plant/equipment
Figure 3: Previous Noise Monitoring Locations.



31st Gravesend St Aidens Scout Hut

St Gregory's Crescent, Gravesend, DA12 4HZ

Figure 1: Site Location and Receptor Locations

Scale as shown

April 2026



31st Gravesend St Aidens Scout Hut

St Gregory's Crescent, Gravesend, DA12 4HZ

Scale as shown

Figure 3: Monitoring Locations



April 2026

APPENDIX A

Noise Complaints Log

[illegible]

APPENDIX B
Noise data for the ventilation system data sheets.



FTXP-M / RXP-M *comfora*

R-32 **BLUEEVOLUTION**

Wall mounted unit for low energy consumption and all round comfort

- > Seasonal efficiency values up to A++ in cooling and heating
- > Residential Controller App (optional): control your indoor from any location with an app, via your local network or internet and keep an overview of your energy consumption
- > Voice control through Amazon Alexa and Google Assistant is also possible.
- > Quiet in operation down to 19 dBA
- > Choosing an R-32 product, reduces the environmental impact by 68% compared to R-410A and leads directly to lower energy consumption thanks to its high energy efficiency
- > **Econo mode:** Decreases power consumption so that other appliances that need large power consumption can be used. This function is also energy saving
- > **Indoor unit silent operation:** "Silent" button on the remote control lowers the operation sound of the indoor unit by 3dB(A)
- > **Air filter:** Removes airborne dust particles to ensure a steady supply of clean air



FTXP20-35M9



RXP20-35M



BRC073
(optional)



ARC480A53



WI-FI ADAPTOR
AVAILABLE AS AN OPTION



FTXP-M / RXP-M

R-32
BLUEEVOLUTION

Indoor Units			FTXP20M9	FTXP25M9	FTXP35M9	FTXP50M	FTXP60M	FTXP71M
Capacity	UK Total Cooling	kW	1.95	2.44	3.42	4.89	5.86	6.93
	UK Sensible Cooling	kW	1.69	1.94	2.49	3.42	4.00	4.73
	Nominal Cooling	kW	2.0	2.5	3.5	5.0	6.0	7.1
	Nominal Heating	kW	2.5	3.0	4.0	6.0	7.0	8.2
Seasonal Efficiency (EN14825) COOLING	Energy Label		A++	A++	A++	A++	A++	A++
	Pdesign	kW	2.0	2.5	3.5	5.0	6.0	7.1
	SEER		6.79	6.92	6.62	7.30	6.82	6.20
	Annual Energy Consumption kWh		103	126	186	240	308	401
Seasonal Efficiency (EN14825) HEATING	Energy Label		A++	A++	A++	A+	A+	A+
	Pdesign	kW	2.2	2.4	2.8	4.6	4.8	6.2
	SCOP		4.65	4.61	4.64	4.40	4.10	4.01
	Annual Energy Consumption kWh		662	728	845	1463	1638	2166
Air Flow Rate (Cooling)	High / Med / Low / Silent	m³/sec	0.158 / 0.123 / 0.093 / 0.070	0.162 / 0.128 / 0.097 / 0.070	0.192 / 0.138 / 0.105 / 0.075	0.272 / 0.233 / 0.192 / 0.138	0.280 / 0.240 / 0.197 / 0.153	0.280 / 0.240 / 0.197 / 0.168
Dimensions	Height	mm	286	286	286	295	295	295
	Width	mm	770	770	770	990	990	990
	Depth	mm	225	225	225	263	263	263
Weight		kg	8.5	8.5	9	13.5	13.5	13.5
Sound Pressure (Cooling)	High / Med / Low / Silent	dBA	39 / 33 / 25 / 19	40 / 33 / 26 / 19	43 / 34 / 27 / 20	43 / 39 / 34 / 27	45 / 41 / 36 / 30	46 / 42 / 37 / 32
Sound Pressure (Heating)	High / Med / Low / Silent	dBA	39 / 34 / 28 / 21	40 / 34 / 28 / 21	40 / 35 / 29 / 21	42 / 38 / 33 / 30	44 / 40 / 35 / 32	45 / 41 / 36 / 33
Sound Power (Cooling)		dBA	55	55	58	59	60	62

Outdoor Units			RXP20M	RXP25M	RXP35M	RXP50M	RXP60M	RXP71M
Dimensions	Height x Width x Depth	mm	550 X 658 X 275	550 X 658 X 275	550 X 658 X 275	734 x 870 x 373	734 x 870 x 373	734 x 870 x 373
Weight		kg	26	26	28	46	50	50
Electrical Details	Power Supply	1ph	1ph	1ph	1ph	1ph	1ph	1ph
	Maximum Input Current (MCA)	A	10.40	10.40	10.40	14.50	15.70	15.70
	Max Fuse Size	A	16	16	16	16	16	16
Interconnection Wiring	Core / Cable Size		3+E / 1.5	3+E / 1.5	3+E / 1.5	3+E / 1.5	3+E / 1.5	3+E / 1.5
Piping Connections	Liquid / Gas	inches (mm)	1/4 (6.4) / 3/8 (9.5)	1/4 (6.4) / 3/8 (9.5)	1/4 (6.4) / 3/8 (9.5)	1/4 (6.4) / 1/2 (12.7)	1/4 (6.4) / 1/2 (12.7)	1/4 (6.4) / 1/2 (12.7)
Pipework	Maximum Length	m	15	15	15	30	30	30
	Maximum Vertical Rise	m	12	12	12	20	20	20
	Precharged to	m	10	10	10	10	10	10
	Additional charge	g/m	20	20	20	20	20	20
	Holding charge	kg	0.55	0.55	0.70	0.90	1.15	1.15
Sound Pressure (Cooling)	Nominal	dBA	46	46	48	47	49	52
Sound Pressure (Heating)	Nominal	dBA	47	47	48	49	49	52
Sound Power (Cooling)		dBA	60	60	62	61	63	66
Operating Range (Cooling)	Min / Max	°CDB	-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
Air Flow Rate (Cooling)	Nominal	m³/sec	0.460	0.460	0.470	0.683	0.758	0.758
Meets ETL criteria			•	•	•	•		

Accessories:

Accessory Ref	Description
BRC073	Wired remote control - connection cable required
BRP069B45	Wifi adaptor for connection to on-line controller
BRCW901A03	3m extension cord required for wired remote controller BRC073
BRCW901A08	8m extension cord required for wired remote controller BRC073
K.CWB90-2	Wall bracket (90kg, 500mm support arm)
K.DT1	Condensate drip tray for use with Split ODU - tray width 800mm
K.CG5	Condensing unit guard (750 x 1050 x 460)
K.CGM	Condensing unit guard (1150 x 1150 x 650)
KLIC-DDV3	KNX interface for Split type systems
KRP413A1S	Adaptor PCB for remote on/off control - constant/pulse contact
KRP928A2S	Adaptor PCB for interface to Daikin centralised control systems
RTD-RA	Adaptor PCB for Modbus connection and/or extended system functions

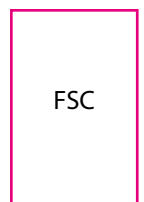
Notes & Features:

- › All fan coils are supplied with infrared remote controller ARC480A53
- › Whisper-quiet in operation down to 19 dBA
- › The unit's compact dimensions make it ideal for renovation projects, especially for above door installation
- › Space-saving contemporary wall-mounted design

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Compact roundflow cassette unit

Bluevolution

FCAG-B / RXM-R

360° air discharge for optimum efficiency and comfort

- › Combination with split outdoor units is ideal for small retail, offices or residential applications
- › Lowest installation height in the market: 204mm for class 71
- › Individual louvre control: flexibility to suit every room layout without changing the location of the unit
- › Modern style decoration panel is available in 3 different variations: white (RAL9010) with grey louvers, full white (RAL9010) or Auto-cleaning panel
- › Automatic filter cleaning results in higher efficiency & comfort and lower maintenance costs. 2 filters available: standard filter and finer mesh filter (for fine dust applications i.e. clothing shops)
- › Two optional intelligent sensors improve energy efficiency and comfort
- › No optional adapter needed for DIII-connection, link your unit directly into the wider building management system
- › Branch duct discharge allows to optimize air distribution in irregular shaped rooms or to supply air to small adjacent rooms
- › Reduced energy consumption thanks to specially developed small tube exchanger, DC fan motor and drain pump
- › Optional fresh air intake
- › Standard drain pump with 675mm lift increases flexibility and installation speed

R-32

BLUEEVOLUTION



FCAG-B



RXM50-60R



BRC7FA532F/B
(optional)

Madoka
BRC1H52W



WI-FI ADAPTOR
AVAILABLE AS AN OPTION

FCAG-B / RXM-R

R-32 BLUEVOLUTION

Indoor Units			FCAG35B	FCAG50B	FCAG60B
Capacity	UK Total Cooling	kW	3.32	4.89	5.57
	UK Sensible Cooling	kW	2.28	3.25	3.68
	Nominal Cooling	kW	3.4	5.0	5.7
	Nominal Heating	kW	4.2	6.0	7.0
Seasonal Efficiency (EN14825) COOLING	Energy Label		A++	A++	A++
	Pdesign	kW	3.5	5.0	5.7
	SEER		6.35	6.54	6.40
	Annual Energy Consumption	kWh	193	266	312
Seasonal Efficiency (EN14825) HEATING	Energy Label		A++	A+	A+
	Pdesign	kW	3.32	4.36	4.71
	SCOP		4.9	4.3	4.2
	Annual Energy Consumption	kWh	948	1419	1569
Air Flow Rate (Cooling)	High / Med / Low	m³/sec	0.215 / 0.177 / 0.147	0.243 / 0.197 / 0.157	0.248 / 0.203 / 0.160
Dimensions (with Decoration Panel)	Height	mm	204 (269)	204 (269)	204 (269)
	Width	mm	840 (950)	840 (950)	840 (950)
	Depth	mm	840 (950)	840 (950)	840 (950)
Weight (with Decoration Panel)		kg	18 (23.5)	19 (24.5)	19 (24.5)
Sound Pressure (Cooling)	High / Med / Low	dBA	31 / 29 / 27	31 / 29 / 27	33 / 31 / 28
Sound Pressure (Heating)	High / Med / Low	dBA	31 / 29 / 27	31 / 29 / 27	33 / 31 / 28
Sound Power (Cooling)		dBA	49	49	51

Outdoor Units			RXM35R9	RXM50R	RXM60R
Dimensions	Height x Width x Depth	mm	550 x 765 x 285	734 x 870 x 373	734 x 870 x 373
Weight		kg	32	49	49
Electrical Details	Power Supply		1ph	1ph	1ph
	Maximum Input Current (MCA) A		10.92	14.21	14.76
	Max Fuse Size	A	13	16	16
Interconnection Wiring	Core / Cable Size		3+E / 1.5	3+E / 1.5	3+E / 1.5
Piping Connections	Liquid / Gas	inches (mm)	1/4 (6.4) / 3/8 (9.5)	1/4 (6.4) / 1/2 (12.7)	1/4 (6.4) / 1/2 (12.7)
Pipework	Maximum Length	m	20	30	30
	Maximum Vertical Rise	m	15	20	20
	Precharged to	m	10	10	10
	Additional charge	g/m	20	20	20
	Holding charge	kg	0.76	1.15	1.15
Sound Pressure (Cooling)	Nominal	dBA	49	48	48
Sound Pressure (Heating)	Nominal	dBA	49	49	49
Sound Power (Cooling)		dBA	61	62	63
Operating Range (Cooling)	Min / Max	°CDB	-10 / 50	-10 / 50	-10 / 50
Operating Range (Heating)	Min / Max	°CWB	-15 / 18	-15 / 18	-15 / 18
Air Flow Rate (Cooling)	Nominal	m³/sec	0.600	0.777	0.777
Meets ETL criteria				•	•

Accessories:

Accessory Ref	Description
BYCQ140E	Decoration panel - White (Included as standard)
BYCQ140EB	Decoration panel - Black
BRP069C82	Wifi adaptor for connection to on-line controller
BRC1H52W	Wired touch screen remote controller - White (Included as standard)
BRC1H52S	Wired touch screen remote controller - Silver
BRC1H52K	Wired touch screen remote controller - Black
BRC7FA532F	Wireless remote controller - White
BRC7FA532FB	Wireless remote controller - Black
BRYQ140B	Integral PIR sensor for roundflow decoration panel (for white panel)
BRYQ140BB	Integral PIR sensor for roundflow decoration panel (for black panel)
BYCQ140EGF	Auto Cleaning Deco Panel - White
BYCQ140EGFB	Auto Cleaning Deco Panel - Black
BYCQ140EW	Decoration Panel - Full White
EW HAR1	Extension wire - Required if Wifi Adaptor and Auto Cleaning panel are installed together
K.CGM	Condensing unit guard (1150 x 1150 x 650)

Accessory Ref	Description
K.CWB90-2	Condensing unit bracket - up to size 71, max weight 90kg of ODU
K.DT1	Condensate drip tray for use with K.CWB90-2
SB.K.RSS_RFC	Wireless room mounted temperature sensor and receiver
KDBHQ56B140	Sealing member for air discharge outlet
KDDP55C160-1	Fresh air intake kit for up to 20% fresh air (Part 1)
KDDP55D160-2	Fresh air intake kit for up to 20% fresh air (Part 2)
KLIC-DI	KNX Interface for Sky Air and VRV systems
KRCS01-7B	Remote room mounted temperature sensor
KRP4A53 and UK.FB2	Unit/group adaptor PCB for remote on/off, status indication and temperature setting
RS-SE	Service and configuration tool for K.RSS
RTD-10 and UK.FB2	Enhanced function PCB for Sky Air and VRV. Duty rotation, Lead Lag control and heating interlock
RTD-20 and UK.FB2	Energy control PCB for Sky Air and VRV
RTD-NET and UK.FB2	Modbus interface PCB for Sky Air and VRV

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VAM-FC9/J8



VAM-FC9/J8

Heat Recovery Ventilation

Fully ErP compliant Heat Recovery Ventilation systems for recovering waste energy from internal spaces to reduce the load on air conditioning and heating systems.



VAM-J8

The VAM-FC9/J8 series heat recovery ventilation systems are very high efficiency heat recovery ventilation systems designed to deliver fresh air into occupied spaces whilst reducing the load on the heating and cooling systems by up to 73%.

Suitable for most commercial applications with fresh air requirements up to 2000m³/h, the VAM-FC9/J8 series is fully compliant with the 2018 ErP lot 6 legislation and incorporates DC fan motors and a specially developed heat exchange element without the need for any condensate drainage.

A full range of optional accessories are available including CO₂ sensors to maintain indoor air quality whilst decreasing energy consumption and a range of filters from M6 (medium) to F7 (fine) can be used to allow flexibility of design. Heater batteries are also available which aid the heat exchange efficiency at low ambient conditions. Weatherproof enclosures can also be purchased for when there is a need to install the VAM units outside.

For applications with high humidity or where odours might be present, please see our Modular Light series which use aluminium heat exchangers for high efficiency sensible energy recovery. For smaller projects with airflows from 150 to 250m³/h see our VAM-FC9/J8 range.

Features:

- > Energy saving ventilation using indoor heating, cooling and moisture recovery
- > Ideal solution for shops, restaurants or offices requiring maximum floor space for furniture, decorations and fittings
- > Free cooling possible when outdoor temperature is below indoor temperature (e.g. during night time)
- > Reduced energy consumption thanks to specially developed DC fan motor
- > Prevent energy losses from over-ventilation while improving indoor air quality with optional CO₂ sensor
- > Can be used as standalone or integrated in the Sky Air or VRV system
- > Optional medium and fine dust filters M6, F7, F8 to meet customer request or legislation
- > Shorter installation time thanks to easy adjustment of nominal air flow rate through the remote controller, so less need for dampers compared with traditional installation
- > No drain piping needed
- > Positive and negative pressure settings are available

VAM-FC9/J8 Heat Recovery Ventilation

			VAM150FC9	VAM250FC9	VAM350J8	VAM500J8	VAM650J8	VAM800J8	VAM1000J8	VAM1500J8	VAM2000J8
Dimensions	Height	mm	285	285	305	305	368	368	368	731	731
	Width	mm	776	776	1113	1113	1354	1354	1354	1354	1354
	Depth	mm	525	525	866	866	920	1172	1172	1172	1172
Weight		kg	23	23	46.5	46.5	61.5	76.5	76.5	160	160
Duct Connection Diameter		mm	100	150	200	200	250	250	250	2 x 250**	2 x 250**
Air Flow Rate	Ultra-High	m³/hr	150	250	350	500	650	800	1000	1500	2000
	High	m³/hr	140	230	300	425	550	680	850	1275	1700
	Low	m³/hr	105	155	200	275	350	440	550	825	1100
	Ultra-High	m³/sec	0.042	0.069	0.097	0.139	0.181	0.222	0.278	0.417	0.556
	High	m³/sec	0.039	0.064	0.083	0.118	0.153	0.189	0.236	0.354	0.472
	Low	m³/sec	0.029	0.043	0.056	0.076	0.097	0.122	0.153	0.229	0.306
External Static Pressure	Maximum	Pa	-	-	150	120	120	200	170	200	170
	Ultra-High	Pa	90	70	90	90	90	90	90	90	90
	High	Pa	87	63	70	70	70	70	70	70	70
	Low	Pa	40	25	50	50	50	50	50	50	50
Sound Pressure Level (Heat Exchange Mode)	Ultra-High	dBA	27.0	28.0	34.5	37.5	39.0	39.0	42.0	42.0	45.0
	High	dBA	26.0	26.0	32.0	35.0	36.0	36.0	38.5	39.0	41.5
	Low	dBA	20.5	21.0	29.0	30.5	31.0	30.5	32.5	33.5	36.0
Electrical Details	Power Supply	V / Hz / Phase	230 / 50 / 1								
	Running Current	A	0.9	0.9	1.6	2.1	2.8	4.4	4.9	8.8	9.8
	Max Fuse Size	A	16	16	16	16	16	16	16	16	16

* For full details of specifications relating to EN308 please see the technical data book. ** 1 x 350 if optional plenum chambers EKPLEN200 are used.

Optional Accessory Compatibility	VAM150FC9	VAM250FC9	VAM350J8	VAM500J8	VAM650J8	VAM800J8	VAM1000J8	VAM1500J8	VAM2000J8
Inlet Heater Battery+	GSIE-KA10009	GSIE-KA15018	GSIEKA20024			GSIEKA25030		GSIEKA35530	

+ Heater battery does NOT require PCB adaptor to connect to VAM. UK,VH-CK VAM EHBX24 conversion kit cable included.

++ EKPLEN200 is required to connect VH5B to VAM1500 / 2000 J.

Optional Inlet Heater Battery		GSIEKA10009	GSIEKA15018	GSIEKA20024	GSIEKA25030	GSIEKA35530
Capacity	kW	0.9	1.8	2.4	3	3
Recommended Fuse Size	A	6	10	16	16	16
Duct Diameter	mm	100	150	200	250	355

Accessory Ref	Description
BRC1H52W	Wired touch screen remote controller - White
BRC1H52S	Wired touch screen remote controller - Silver
BRC1H52K	Wired touch screen remote controller - Black
KRP2A52 and UK.FB2	System adaptor PCB for remote on/off, status indication and temperature setting
RTD-Net and UK.FB2	Modbus Interface PCB for Sky Air and VRV
RTD-20 and UK.FB2	Energy control PCB for Sky Air and VRV
KRP50-2	PCB Adaptor for VAM-A series connection to humidifier
BRP4A50A	PCB Adaptor for VAM-B Series connection to 3rd party heater or humidifier
EKAFVJ50F6	Air filter for VAM350 / 500 J : Medium M6
EKAFVJ50F7	Air filter for VAM350 / 500 J : Fine F7
EKAFVJ50F8	Air filter for VAM350 / 500 J : Fine F8
EKAFVJ65F6	Air filter for VAM650 / 800 J : Medium M6
EKAFVJ65F7	Air filter for VAM650 / 800 J : Fine F7
EKAFVJ65F8	Air filter for VAM650 / 800 J : Fine F8
EKAFVJ100F6	Air filter for VAM1000 / 2000 J : Medium M6
EKAFVJ100F7	Air filter for VAM1000 / 2000 J : Fine F7
EKAFVJ100F8	Air filter for VAM1000 / 2000 J : Fine F8
BRYMA65	CO ₂ Sensor for VAM350 / 500 / 650
BRYMA100	CO ₂ Sensor for VAM800 / 1000
BRYMA200	CO ₂ Sensor for VAM1500 / 2000
EKPLEN200	Plenum for VAM1500 & 2000 (4 required per VAM) 350mm duct

Notes:

- Please contact your local sales office for required options when combined operation with an air conditioning system is required.
- Only one filter is required to cover the whole of one side of the heat exchanger, even if the heat exchanger has two sections. For VAM 1500/2000 two filters are required.
- VKM models must be connected as the slave indoor unit of a standard VRV indoor unit and share the same BRC1H* remote controller and BS-Q box (If connected to Heat Recovery).

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FSC

NEW FROM SOLAX

X1-BOOST G4



X1-BOOST G4

2.5kW / 3.0kW / 3.3kW / 3.6kW
4.2kW / 5.0kW / 6.0kW

Features

Superior Performance

- DC Input: 200% oversizing, 16A current, 50V startup voltage
- In-built global MPP scan for higher yield efficiency

User Friendly Monitoring

- 10s level interval of data update(Optional, new WiFi dongle required)
- Quick and easy configuration (WiFi&APP)

Assured Safety & Reliability

- AC/DC built-in Type II SPD (Optional) and I-V curve diagnosis supported
- Optional external RSD (Rapid Shutdown) and integrated DC AFCI protection (Optional)
- In-built export control function

Superb Adaptability

- Home EV Charger and Heat Pump Solution adaptable
- Mass management and broad extension via Datahub
- Master/Slave parallel solution via Modbus supported

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V1.2. Information may be subject to modify without notice.
Exclusive for Solax Power Australia

DC INPUT

Max. PV array input power [Wp]	6000	6000	6600	7200	8000	10000	12000
Max. PV input voltage [V]	600	600	600	600	600	600	600
Startup voltage [V]	50	50	50	50	50	50	50
Nominal input voltage [V]	360	360	360	360	360	360	360
MPP tracker voltage range [V]	40~560	40~560	40~560	40~560	40~560	40~560	40~560
No. of MPP trackers / String per MPP tracker	2 / 1						
Max. PV input current[A]	16 / 16						
Isc PV Array Short Circuit current [A]	22 / 22						

AC OUTPUT

Rated AC output power [W]	2500	3000	3300	3680	4200	5000 ^①	6000
Rated AC ouput apparent power (VA)	2500	3000	3300	3680	4200	5000 ^①	6000
Rated AC output current [A]	10.9	13.1	14.4	16	18.3	21.7	26.1
Max. AC output apparent power [VA]	2750	3300	3630	4048 ^④	4620	5000 ^②	6000
Max. AC output current [A]	12	14.4	15.8	17.6 ^⑤	20.1	21.7 ^③	27.3
Nominal AC voltage / AC voltage range [V] **	220/230/240;90~290						
Nominal AC frequency / AC frequency range [Hz] **	50/60;±5						
Power Factor range	0.8leading~0.8lagging						
THDi (rated power) [%]	<3						

SYSTEM DATA

Max. Efficiency [%]	98
Euro. Efficiency [%]	97
Standby consumption [W] @Night	<3
Ingress protection	IP66
Operating ambient temperature range [°C]	-25~60
Max. operation altitude [m]	4000
Relative humidity [%]	0~100
Typical noise emission [dB]	25 ^⑥
Storage temperature [°C]	-30~70
Dimensions (W x H x D) [mm]	404x274x146
Weight [kg]	11
Cooling concept	Nature cooling
Communication interfaces	USB/RS485/DRM, Optional: Meter/CT *
Optional monitoring dongle	Pocket WiFi/LAN/4G
Display	2 x LED + LCD (16 x 2) / APP

PROTECTION

Over / under voltage protection	Yes
DC isolation protection	Yes
Monitoring ground fault protection	Yes
Grid monitoring	Yes
DC injection monitoring	Yes
Back feed current monitoring	Yes
Residual current detection	Yes
Anti-islanding protection	Yes
Over temperature protection	Yes
SPD (DC/AC)	Type II / Type II (Optional)
Arc-fault circuit interrupter (AFCI)	Optional
AC auxiliary power supply (APS)	Optional
DC Switch	Yes

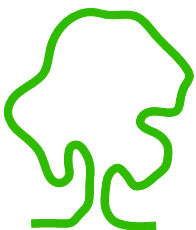
STANDARD

Safety	IEC / EN 62109-1 / -2
EMC	EN61000-6-1 / 2 / 3 / 4, EN61000-3-2 / 3 / 11 / 12
Certification	IEC61727, EN50549, G98/G99, AS 4777.2, VDE4105, CEI 0-21, VFR, PPDS, TOR

① 5000 (4600 for VDE4105, 4999 for AS4777.2) ② 5000 (4600 for VDE4105, 4999 for AS4777.2) ③ 21.7 (20 for VDE4105) ④ 4048 (3680 For G98/G99, TOR and PPDS) ⑤ 17.6 (16 For G98/G99, TOR and PPDS)

⑥ For models with internal fan(Optional), typical noise emission is 30 dB

* Not included in the package. Please purchase additionally. ** The AC voltage and the frequency range may vary from different country codes.



eas ltd

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