

Ian Sharland LIMITED

Noise & Vibration Control Specialists

Ashfield House
Back Lane
Marlborough
Wiltshire SN8 1JJ
Telephone: (01672) 515761
Email: office@iansharland.co.uk

30 January 2025

Shriya Gohil
Bellway Homes Limited (Thames Valley)
Imperium
Imperial Way
Reading
Berkshire RG2 0TD

Dear Shriya

RE: DEE ROAD, READING – CONDITION 20

Thank you for your recent email on the subject and in response please find below the required acoustic clarification, which will go towards the discharge of Condition 20 of the planning consent.

The condition states:

20. No development hereby permitted shall commence on site above ground floor slab level until a detailed scheme, informed by an assessment of the current noise environment, for protecting the dwellings from the external noise environment of the area has been submitted to and approved, in writing, by the Local Planning Authority. The scheme itself shall be designed, specified and constructed so that the sound insulation performance of the structure and the layout of the dwellings are such that the indoor ambient noise levels do not exceed the values detailed in Table 4 of BS 8233:2014 and the and that the individual noise events do not exceed 45 dB LA,max,F more than 10 times a night. Where opening windows will lead to an internal noise level increase of 5 dBA or greater above BS 8233:2014 recommended internal levels, the scheme shall include provision of alternative mechanical ventilation with minimum performance equivalent to a mechanical heat recovery (MVHR) system with cool air bypass as an alternative means of cooling and ventilation. Noise from the system shall not result in BS8233 internal levels being exceeded. Thereafter, the development shall not be carried out other than in accordance with the approved scheme which shall be completed before any part of the accommodation hereby approved is occupied.

I would initially refer you to our acoustic report, submitted to support the planning application ('Dee Road Fire Station, Environmental Noise Assessment', v1 dated September 2023). In respect of the recommendations made in that report, I am pleased to confirm the following:

- (i) The design targets adopted in the report were, when windows are closed, those set out in Table 4 of BS8233:2014, with the additional requirement to meet the 45 dB(A) L_{Amax} limit.
- (ii) The report confirmed that all glazing should achieve a minimum sound insulation performance of 27 dB $R_w + C_{tr}$. You have kindly confirmed that the actual glazing installed in a 4/10/4 configuration, with a sound insulation performance of 28 dB $R_w + C_{tr}$ (in fact there appears to be some windows with a higher acoustic specification than this).
- (iii) The report also confirmed that any trickle vents would need to offer a minimum sound insulation of 35 dB $D_{n,e,w}$ in the open position. The confirmed Munster Joinery M335/AV17 trickle vents offer 36 dB, and thereby exceed the minimum requirement.
- (iv) In respect of ventilation, I understand that all properties are fitted with a mechanical solution. However, it is worth noting that the following plots do not technically require such systems under the provision of Condition 20:

18 – 24
26 – 35
39 – 43
47 – 51

- (v) For all houses, habitable rooms will be served by a dMEV unit, specifically a Zehnder Unity CV2.1HTCTA110 Unity Low Energy dMEV Fan. Assuming a normal flow of 10l/s to the room, the calculated noise level in the living (nom. 1m from the grill) is 29 dB(A). Such a value is comfortably below the BS8233 targets of 35 dB(A) for living rooms and 30 dB(A) for bedrooms.
- (vi) The apartments have adopted a centralised mechanical extract system, specifically a Greenwood CMEV.4eHT unit. The calculated noise level in bedrooms and living rooms on normal trickle operation is 25 dB(A). Again, this noise level would be comfortably within the BS8233 targets.
- (vii) Individual apartment bedrooms, where necessary across the site, also include Zehnder Unity CV2 dMEV fan. As indicated above, at 10l/s, noise levels would be below the 30 dB(A) target from BS8233.

I hope this clarification is self-explanatory but please do come back if you have any questions.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Richard Sharland'. The signature is fluid and cursive, with a large initial 'R' and a stylized 'S'.

RICHARD SHARLAND
MA MSc CEng MIOA

dMEV & cMEV Data Sheets

■ Decorative radiator ■ Comfortable indoor ventilation ■ Heating and cooling ceilings ■ Industrial air cleaning



Zehnder Unity CV2.1HT

**Decentral continuous mechanical extract ventilation (dMEV) with
optional humidity sensor and timer**

Product data sheet

always the best climate



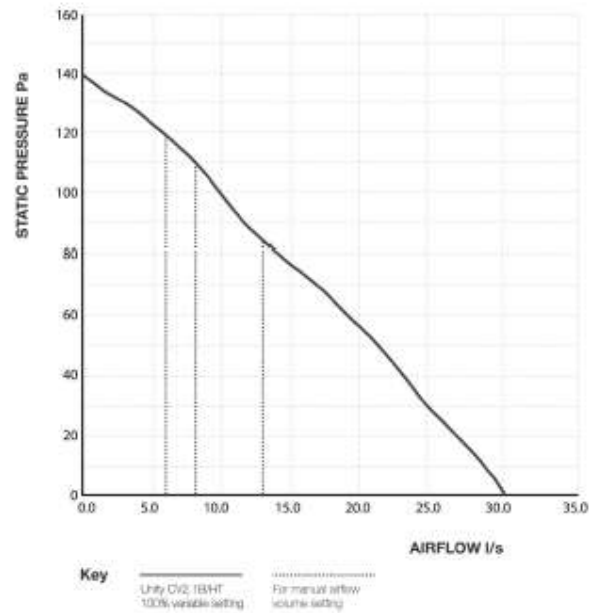


SAP PCDB

Rigid Ducting		SFP (w/l/s)
Configuration	Location	2021
In-room	Kitchen	0.13
	Bathroom	0.11
Through-wall	Kitchen	0.1
	Bathroom	0.1

Semi-rigid Ducting		SFP (w/l/s)
Configuration	Location	2021
In-room	Kitchen	0.13
	Bathroom	0.11
Through-wall	Kitchen	0.1
	Bathroom	0.1

Pressure Curve



Sound Data

Setting	Test area	Octave Band (Hz) Sound Power Level, dB								dB(A) @ 3 m
		63	125	250	500	1000	2000	4000	8000	
MIN	Casing	29.2	23.1	22.6	17.5	13.0	14.5	18.4	23.1	7.9
4 l/s	Casing	29.1	24.2	22.5	19.0	14.2	14.9	18.4	23.1	8.2
6 l/s	Casing	30.1	25.2	27.6	22.9	15.1	15.1	18.1	22.8	9.5
8 l/s	Casing	31.6	27.9	35.0	25.5	20.5	19.6	18.7	23.0	13.3
10 l/s	Casing	33.7	28.5	39.7	32.0	24.8	23.5	19.2	23.0	17.7
12 l/s	Casing	34.5	33.8	44.4	36.9	30.1	28.9	20.8	23.2	22.2
13 l/s	Casing	35.2	38.3	46.5	38.4	32.2	31.9	21.5	23.2	24.3

Casing tested according to ISO 3741:2010. Environment dB(A) @ 3m given as hemispherical.

CMEV.4e

Central continuous mechanical extract system

Physical specification

All measurements in millimetres.



Weight: 3.8 kg

Materials: Fan housing manufactured from high grade black polypropylene material.

Features

Top of the energy class

The best SAP Appendix Q eligible product with an incredible 0.16w/l/s* performance which will help reduce DER's in SAP and contribute to achieving Level 3 and above of the Code for Sustainable Homes.

Complete control

A continuously running ventilation system for the whole house that actively contributes to indoor air quality, controlled via a wired in remote switch to control trickle and boost speeds.

Not seen and not heard

A completely discreet system, centrally mounted in a cupboard means no more nuisance running noise.

Space saving

5th extract point can be located at bottom of unit (requires cut out on site) for easier connection to ducting in applications with limited space.

A perfect fit

Compact design (one of the smallest on the market) makes it ideal for apartments and small properties that usually don't have the window space for all of the trickle vents required with traditional 'on and off' extract fans (System 1).

No fuss installation and commissioning

One of the fastest units to connect and commission on site. 100% variable motor speed options for trickle and boost speeds adjusted through speed pots located on fan body. (medium speed will be based on mid-point between selected trickle and boost speeds).

From inside to out

Energy efficient EC motor, 5 extract spigots, wall or ceiling mounting, clever motor assembly design which can be easily removed once isolated, allowing for cleaning and maintenance if necessary.

*0.16w/l/s based on kitchen + two wet rooms installed with appropriate ducting as detailed in SAP Appendix Q report.

Download full details from www.sap-appendixq.org.uk

Controls

Model	Operation
CMEV.4e	Wired in 3 position remote switch (GS1) to control trickle, medium and boost speeds. Double pole light switches or GS2 switch to control trickle and one boost speed.

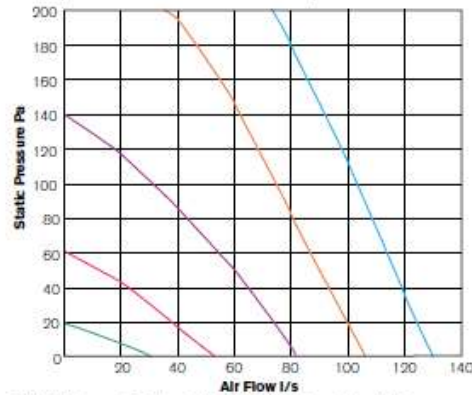
Installation

- Wiring:** Must comply with IEE Regulations, see wiring diagrams on page 086.
- Cable:** 5 core 0.75mm² flying lead.
- Fuse:** 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required).
- Ducting:** Connect to 100mm or 125mm ducting. Solid ducting recommended to minimise air resistance.

Performance

Model	Performance to BS 848 Pt1 In free air (l/s)			Consumption (W)			Sound Pressure level @ 2m dB(A)		
	Max	Boost	Trickle	Max	Boost	Trickle	Max	Boost	Trickle
CMEV.4e 129	80*	51*	37.6	11*	4.9*	34	34*	9*	

*Factory settings for trickle and boost speeds. Medium speed for the unit will be the mid-point between selected trickle and boost speeds.



CMEV.4e has a 100% variable motor speed control which is commissioned via a speed pot located on the fan body.

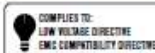
— Variable setting 5 (max) — Variable setting 2:
— Variable setting 4 — factory set trickle speed
— Variable setting 3: — Variable setting 1: (min)
factory set boost speed

Electrical Specification: 230V~50Hz Class II
Consumption:
 Maximum 37.6W
 Boost 11W
 Trickle 4.9W

Specification



2 YEAR GUARANTEE



Carbon cutting technology

This product will help you reduce your DER points in SAP



You get rewards in SAP by reducing your DER (dwelling emission rate) when using this product.

Basically you use the product performance information instead of the default information and you reap the energy rewards.

www.sap-appendixq.org.uk



Life is simple when you understand what energy benefits you get when you choose a more efficient product, so here they are:

73%* energy usage, **£14.38*** on electric bill, **73kg CO₂*** saving to environment.

*all based on continuously running at low speed and 1.5hrs on boost, against standard market alternative.

Centair: Environmental

Ancillaries



GDS Modular rectangular (204x60) and round (125mm) light weight PVC ducting system (page 141).



ST100/125 Spiral wound galvanised steel ducting (page 142).



GDS Accessories Plastic loured airbricks available in brown, terracotta and sand (page 141).



GGS2 External 125mm loured vent for wall mounting. Available in white or brown (page 141).



GG68 PVC extract/supply valve 125mm (page 141).



Flexiduct Flexible 125mm PVC & aluminium ducting (page 140).



GS2 2 position switch available for controlling unit between trickle and boost speed.



GS1 3 position switch available for controlling unit between trickle, medium & boost speeds.



KSOP125 Extract valve fire rated 125mm (page 142).



KSO125 Metal extract valve 125mm (page 142).