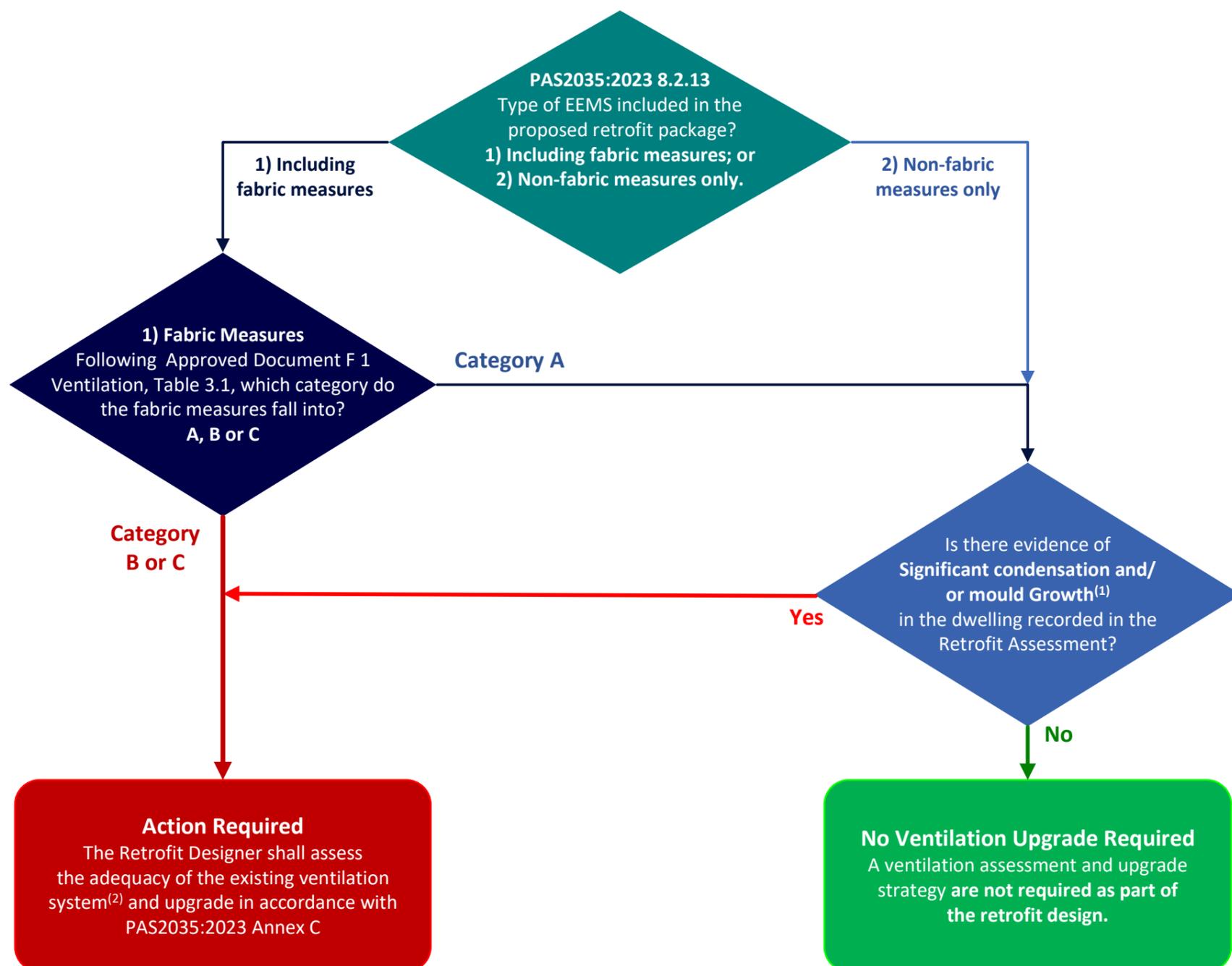


Retrofit Designer Assessment of Adequacy of Existing Ventilation System



(1) Notes on Condensation and Mould Growth
 A small amount of condensation in bathrooms around sinks or showers, or around the edge of windows in extreme weather conditions, is normal.
 Examples of significant, actionable mould and condensation issues would include where the assessment has recorded the following:

- Water stains or discolouration on ceilings, walls, and floors;
- Excessive condensation – particularly in habitable rooms;
- Large or dense areas of mould growth;
- Musty unpleasant odours;
- Peeling paint or wallpaper;
- Signs of wet rot on window frames, sills or skirting boards;
- Increased humidity levels.

(2) Notes on Assessment of Background Ventilation
 Where there is evidence of condensation and/or mould growth in the dwelling in the retrofit assessment, this would indicate that the existing ventilation provision for the property is inadequate. Therefore the ventilation system as a whole should be assessed and upgraded as required.
Any guidance used to assess whether background ventilation upgrades are required should not be used in this instance.

Notes on Testing of Existing Extract Ventilation
 Under PAS2035:2023 and Approved Document F1 Ventilation, the testing of extract ventilation is not Mandatory.
However, it is always recommended as best practice!
 The adequacy of extract ventilation could be determined by:

- Where available or visible, the make and model of the extract fan could be used to check the designed extract flow rate;
- For intermittent extract, a handheld anemometer could be used to estimate the flow rate intermittent extract fans (using a quick conversion from m/s to l/s);
- A quick check of the wet room to assess whether the room is free of the build-up of mould and condensation or odours;
- A visual inspection of the condition of the fan and any ducting:
- Is the fan running freely (i.e. running continuously when operated, without producing any unusual noises);
- Is the inlet grill clean and free of dust;
- Ducting condition, correct type installed (rigid for long runs, flexi duct to be used for junction only);

Should any of the above prove to be unsatisfactory or unclear, best practice would suggest the assessment of the extract ventilation following BSRIA BG46.

Document References

1. Building Regulations 2010 Ventilation, Approved Document F, Volume 1: Dwellings, 2021 Edition
2. PAS2035:2023 Retrofitting dwellings for improved energy efficiency Specification and guidance

Table 3.1 Chart for categorising impact on ventilation when carrying out works in existing dwellings

Table 3.1 Energy efficiency measures		Category of measure
Roof insulation		
a.	Renewing loft insulation, including effective edge sealing at junctions and penetrations	Minor
b.	Loft conversions or works that include changing a cold loft (insulation at ceiling level) to a warm loft (insulation at roof level)	Minor
Wall insulation		
c.	Installing cavity wall insulation to any external wall	Minor
d.	Installing external or internal wall insulation to less than or equal to 50% of the external wall area	Minor
e.	Installing external or internal wall insulation to more than 50% of the external wall area	Major
Replacement of windows and doors⁽¹⁾		
f.	Replacing less than or equal to 30% of the total existing windows or door units	Minor
g.	Replacing more than 30% of the total existing windows or door units	Major
Draught-proofing (other than openings)⁽²⁾		
h.	Replacing a loft hatch with a sealed/insulated unit	Minor
i.	Sealing around structural or service penetrations through walls, floors or ceiling/roof	Minor
j.	Sealing and/or insulating a suspended ground floor	Major
k.	Removing chimney or providing another means of sealing over chimney, internally or externally	Major
NOTES:		
1. If the energy efficiency works involve only replacing windows, then the guidance in paragraphs 3.14 to 3.16 may be followed as an alternative means of demonstrating compliance.		
2. Draught-proofing measures might not, on their own, constitute building work. This work may be controllable under the Building Regulations if carried out as part of other building work.		

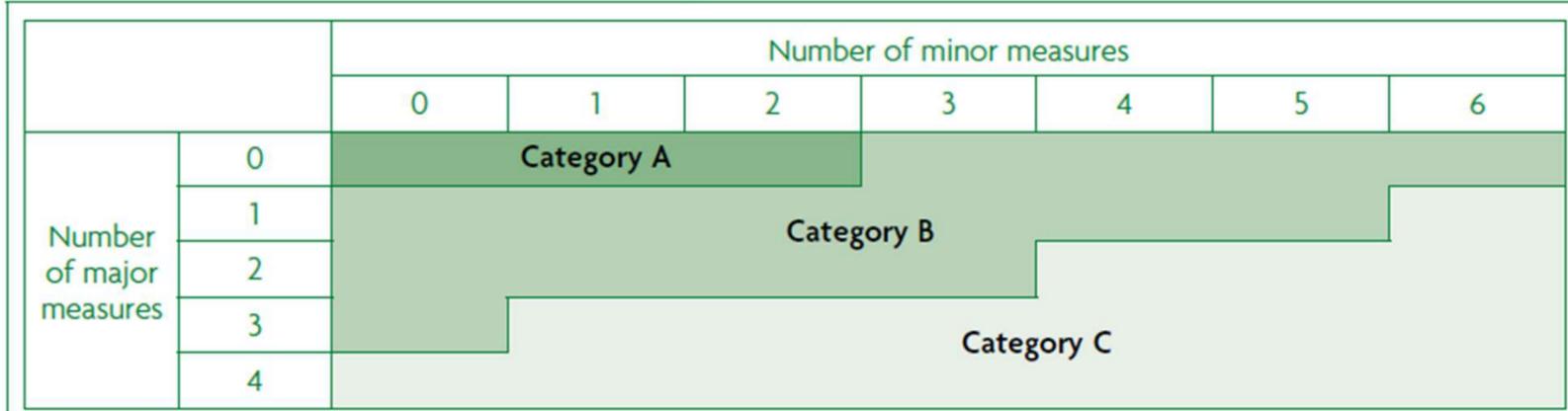


Diagram 3.1 Chart for categorising impact on ventilation when carrying out works in existing dwellings

Table 3.1 Simplified Method

When carrying out energy efficiency measures on an existing dwelling, Table 3.1 should be used to calculate the number of major and minor energy efficiency measures involved. This calculation should include all of the following:

- Energy efficiency measures fitted since the original dwelling was constructed, to consider accumulation of measures.
- Energy efficiency measures planned.

NOTE: Where specific energy efficiency measures are not included in Table 3.1, the most similar category should be chosen instead.

Diagram 3.1 Results

Category A – Where there is no evidence of damp and/or mould recorded in the Retrofit Assessment, the dwelling’s ventilation system will not require an upgrade design.

Category B or C – The ventilation system **will** require an upgrade design.