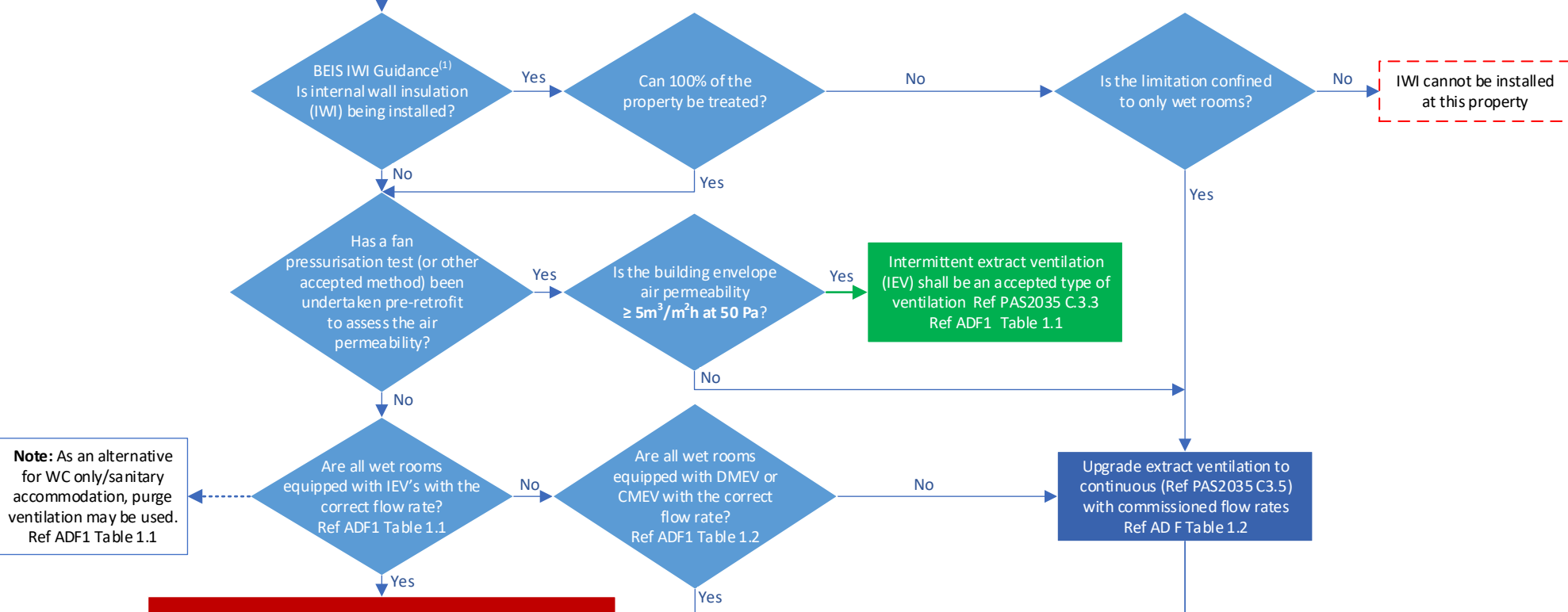
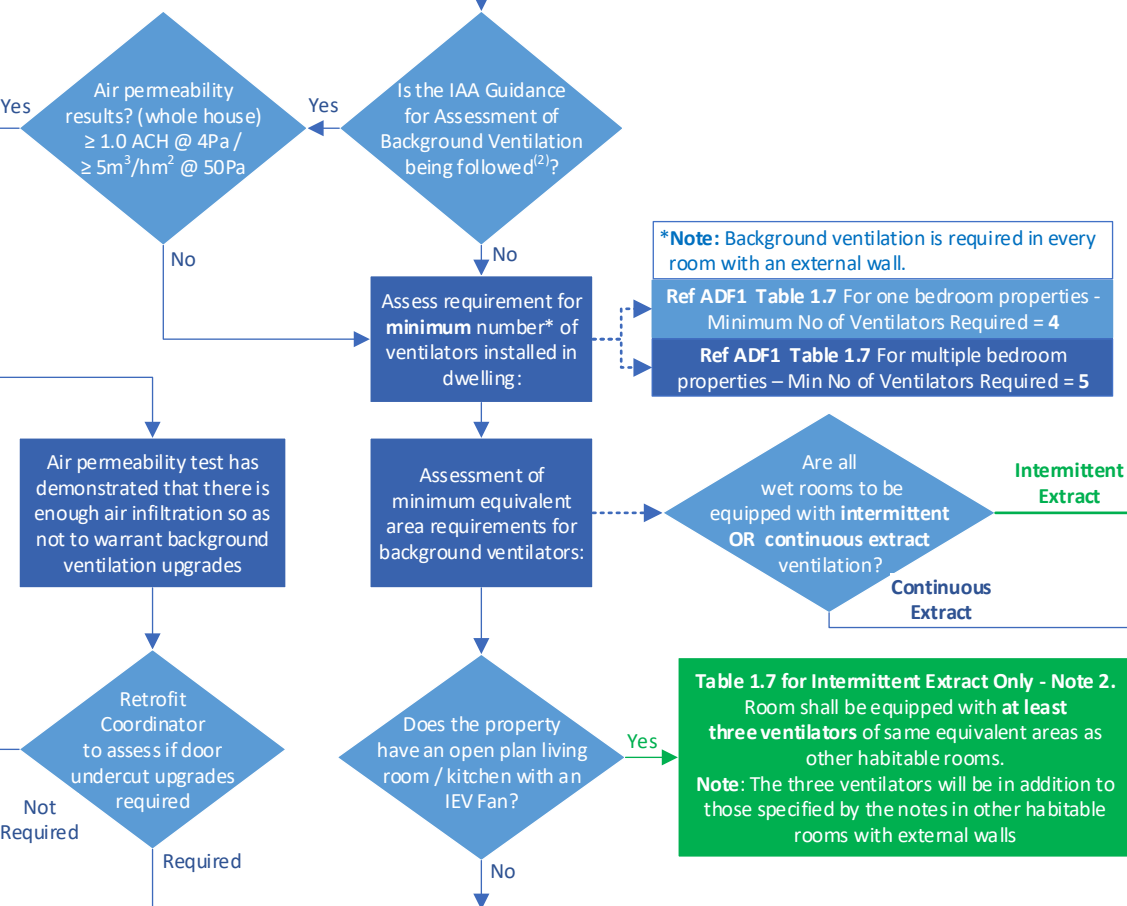


## 1.0 Assess Extract Ventilation in all wet rooms

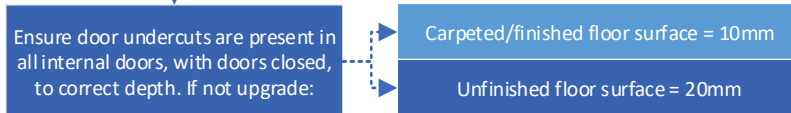
This process has been developed to assist Retrofit Assessors, Coordinators and Designers in assessing the existing ventilation system in a dwelling and to provide guidance on providing compliant upgrades. This process follows the guidance provided by the Reference Documents listed below.



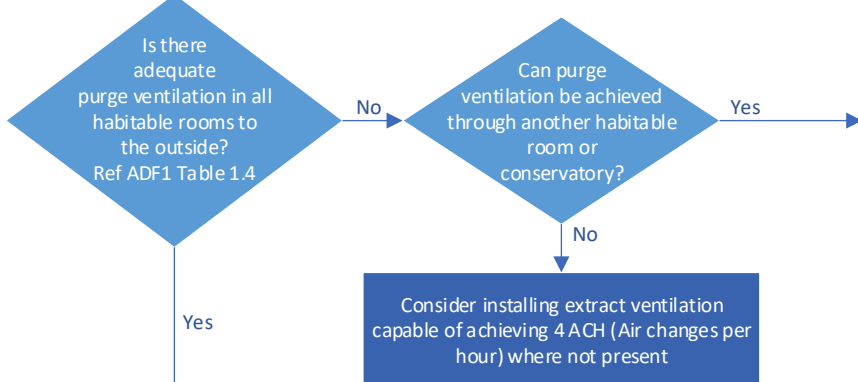
## 2.0 Assess Background Ventilation in all rooms



## 3.0 Assess Undercuts under all internal Doors



## 4.0 Assess Purge Ventilation in all habitable Rooms



Assessment Complete

## Reference Tables and Notes (Extracts from ADF 1)

Is the dwelling multiple floors or single storey?

Table 1.7 Minimum equivalent area of background ventilators for natural ventilation

Room	Min equivalent area of background ventilators for dwellings with multiple floors*	Min equivalent area of background ventilators for single storey dwellings
Habitable Rooms	8,000mm <sup>2</sup>	10,000mm <sup>2</sup>
Kitchen	8,000mm <sup>2</sup>	10,000mm <sup>2</sup>
Utility Room	No minimum	No minimum
Bathroom	4,000mm <sup>2</sup>	4,000mm <sup>2</sup>
Sanitary Accommodation	No minimum	No minimum

### Notes:

- Expert advice should be sought where the dwelling has a limitation on exposed façades preventing compliance with ADF1.
- Where a kitchen and living room accommodation are not separate rooms (i.e. open plan), no fewer than 3 vents of the same equivalent area as for habitable rooms should be provided within the open-plan space.
- The total number of ventilators installed in a dwelling's habitable rooms and kitchens should be no fewer than five, except in one-bedroom properties, where there should be no fewer than four.
- If a bathroom has no window or external façade through which a ventilator can be installed, the minimum equivalent area specified should be added to the ventilator sizes specified in other rooms.

### ADF1 - 1.64 Background Ventilation for Continuous Mechanical Extract Ventilation

Where continuous extract ventilation is used, background ventilators should satisfy all of the following conditions:

- Not be installed in wet rooms
- Provide a minimum equivalent area of 4,000mm<sup>2</sup> for each habitable room in the dwelling.
- Provide a min total number of ventilators that is the same as the number of bedrooms plus two ventilators (i.e. a one-bedroom dwelling should have three background ventilators, a two-bedroom dwelling should have four background ventilators, etc.).

Table 1.1 Minimum extract ventilation rates for intermittent extract systems

Room	Intermittent extract rate (l/s)
Kitchen (cooker hood extracting to the outside)	30
Kitchen (no cooker hood or cooker hood does not extract to the outside)	60
Utility room	30
Bathroom	15
Sanitary Accommodation	6

### Notes:

As an alternative for sanitary accommodation, the purge ventilation guidance may be used.

Table 1.2 Minimum extract ventilation rates for continuous extract systems

Room	High rate (l/s)	Continuous rate
Kitchen	13	The sum of all extract ventilation in the dwelling on its continuous rate should be at least the whole dwelling ventilation rate given. (Ref ADF1 Table 1.3). If the continuous rate of ventilation provided in a room is equal to or higher than the minimum high rate specified in the table, no extra ventilation is needed.
Utility	8	
Bathroom	8	
Sanitary Accommodation	6	

The habitable room or conservatory should have openings to the outside to provide both of the following:

- Permanent opening based on 1/20 of the combined floor area of the habitable rooms (or the habitable room and the conservatory).
- Background ventilation with a minimum equivalent area of at least 10,000mm<sup>2</sup>.

### Notes

- Extract Ventilation** – this process has been designed to cover the use of intermittent or continuous extract ventilation. Where Mechanical Ventilation with Heat Recovery (MVHR) is being considered, the system should be designed by a qualified ventilation competent person.
- Background Ventilation** - is required in every room with an external wall.
- Extract Ventilation** - If extract ventilation is required in rooms or in rooms adjacent to open flued combustion appliances or solid fuel open fires – Post install safety test must be carried out in accordance with Approved Document J, to confirm that combustion appliances operate safely regardless of whether the extract fans are running or not.
- Active combustion ventilation** (core vents) based upon best practice, these should not be included as part of the background ventilation requirement for equivalent areas.
- Dwellings with Basements** – for dwellings with basements, the requirements ventilation should be assessed by following ADF1 Paragraphs 1.38 – 1.41.

### Document References

- BEIS Guide to Best Practice Retrofit Internal Wall Insulation, September 2021
- Insulation Assurance Authority (IAA) Background Ventilation Assessment of Existing Buildings V1.1
- Building Regulations 2010 Ventilation, Approved Document F, Volume 1: Dwellings, 2021 Edition
- Building Regulations 2010 Combustion Appliances and Fuel Storage Systems Document J, 2013 Amendments
- PAS2035:2019+A1:2022 Retrofitting dwellings for improved energy efficiency Specification and guidance