# VENTILATION EXPLAINED

## Ventilation is necessary in buildings to remove the 'stale' air and replace it with 'fresh' air, supporting a healthy home.

Ventilation can be designed to allow air to flow through your home. This reduces the chances of unwelcome condensation, which can lead to mould growth. Designing effective ventilation also allows fresh air to replace stale air, including carbon dioxide, cooking smells, water vapour and dust.

As part of the new government quality standard for retrofit, there are specific requirements for ventilation. These measures are put in place to protect both the resident and the building

**Ventilation is required in government funded retrofit projects**

Improved ventilation may be required if the home has issues with mould or condensation, and also when installing new systems to ensure there are no unintended consequences from the works. Properties with insufficient ventilation could lead to inhabitable living conditions if not treated.

### Examples of poor ventilation

Black mould following a pathway of a cold bridge, potentially a building defect or cold spots along the building.

Black mould around and on windows due to lack of ventilation and no treatment.

### The principles of ventilation

Heating and ventilation are part of the same process, and they must work together for them to be effective and in balance. Ventilation is necessary in buildings to remove the 'stale' air and replace it with 'fresh' air, supporting a healthy home.

Once your home receives more insulation, ventilation can be designed alongside this by the retrofit team carrying out works. It is important to listen to their recommendations, as the ventilation will be designed to:

- **Help to moderate internal temperatures**
- **Reduce the accumulation of moisture, odours, and other gases**
- **Create air movement in your home**

## TOP 3

### Benefits of improved ventilation

1. **Improved air quality**
2. **Helps against risk of condensation and mould**
3. **Effective in partnership with insulation**

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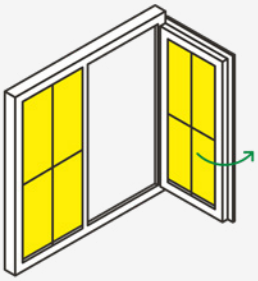
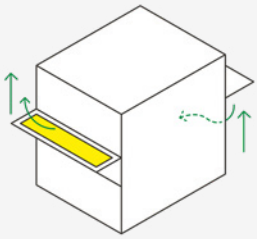
# Recommendations for your home

Our Retrofit Advisors will assess your home and recommend the measure that will be beneficial to you.



## 1. Manually controlled ventilation

An example of manually controlled ventilation is opening a window.

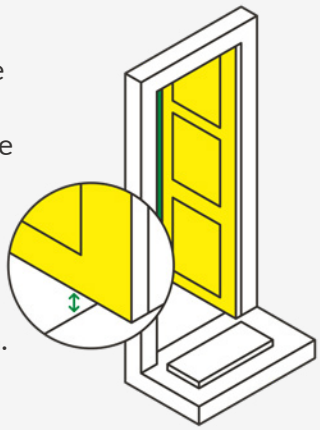


## 2. Cross ventilation

A natural method of moving air through your home. The system relies on wind to force cool exterior air into the building through an inlet (like a wall louvre, a gable, or an open window) while outlet forces warm interior air outside (through a roof vent or higher window opening).

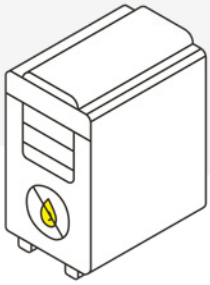
## 3. Trickle vents

Allows air to trickle into your home at a reasonable rate so that you will not feel a cold draught. Trickle vents can be installed in windows. It is also possible to add air bricks to walls and vented roof tiles.



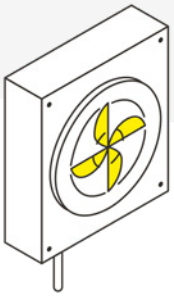
## 4. Door undercuts

The clearance between internal doors and the floor level. This is done to allow for cross ventilation.



## 5. Mechanical ventilation

Mechanical ventilation such as fans, can be installed in windows or walls directly, or in air ducts to supply air to or from the room. There are a number of different products /types that could be installed.



## 6. Extract fans

Domestic activities such as cooking, clothes washing, showering and bathing produce a significant amount of airborne moisture. These activities take place in what are defined as wet rooms (e.g. a kitchen, bathroom or utility room) and it is part of the PAS 2035 that in all of these environments, there is a form of controllable mechanical ventilation present.

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