

# case study

## MVHR system avoids the need for unsightly and energy wasteful trickle vents

ADM Systems has helped a homeowner in Devon achieve high levels of energy efficiency by supplying and installing a heat recovery ventilation (MVHR) system avoiding the need to fit trickle vents in the windows.



The self builder chose an MVHR system because it was able to capture over 90 per cent of the heat from the outgoing stale air, helping to significantly reduce wasteful and expensive loss of heat.

This was important as the self builder was looking for ways of reducing the heating bill in the larger detached property. After considering various alternatives and talking to other self builders, he concluded that an MVHR system was the most effective method of achieving this.

The owner had an issue with traditional extract ventilation systems as he knew this resulted in the heat being wasted as it draws out warm air from inside the property, without any form of heat recovery. This is often exacerbated by trickle ventilators in the windows that allow replacement air to enter the property which, on a very cold day, can be well below 0°C.

### The Heat Recovery Files:

<b>Client:</b>	Anthony Robinson
<b>Project</b>	Self build property in Devon
<b>Ventilation:</b>	Heat recovery with mechanical ventilation (MVHR) system.
<b>Heating system:</b>	Gas fired boiler system
<b>Construction:</b>	Combination of timber frame construction and traditional cavity wall
<b>Other:</b>	ADM supplied a central vacuum system to this property

***We are delighted with the efficiency of the MVHR system as it saves us a huge amount on our heating bills. It was an added advantage that it avoided the need for trickle ventilators in our beautiful new oak windows"***

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“The MVHR system from ADM provided the perfect solution,” said Anthony Robinson, owner of the property. “We are highly delighted with the efficiency of the system as it saves us a huge amount on our heating bills by cutting the wasteful loss of heat. It was an added advantage that it avoided the need for trickle ventilators in our beautiful oak windows.”

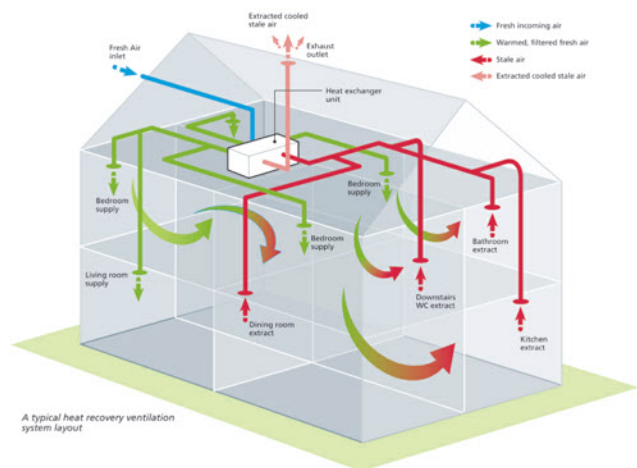
The MVHR system collects stale moist air from the kitchen, bathroom and living areas. This stale contaminated air passes through the system and is exhausted to the outside. Clean filtered fresh air is then drawn from the outside and as the two air streams pass each other, the heat is transferred from the outgoing stale air to the fresh incoming air. There is no mixing of air streams.

The owner of the property also chose an MVHR system from ADM because it had the added benefit of creating a much healthier indoor air quality. It does this by removing harmful pollutants and stale odours, as well as lowering relative humidity. This in turn helps to eradicate house dust mites, which cause real problems for many asthma sufferers, particularly in houses with poor ventilation.

Heat recovery systems are able to help tackle condensation. For example, a typical household of four people can produce up to 18 litres of moisture per day, simply by breathing, cooking and washing. When this moisture in the air comes into contact with a cooler surface, such as a wall or glass, it condenses to form water droplets. This moisture encourages mould growth, which requires regular and costly redecoration.



In addition, ADM supplied a central vacuum system that is up to five times more powerful than a portable vacuum. A central vacuum system eliminates the need to carry a heavy portable vacuum cleaner around the house, which is especially useful in two and three storey properties. Central vacuum systems ensure no re-circulation of dust within the room – another common problem with portable vacuums.



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