

case study



HOUSING ASSOCIATION TACKLES CONDENSATION WITH MVHR SYSTEM

ADM Systems has helped Spenborough Flower Fund address the problem of condensation in 18 of its properties in Birkenshaw, Bradford, by fitting a heat recovery ventilation (MVHR) system in each house.

Fitting the MVHR system reduced condensation, eliminating the disruptive and costly exercise of having to constantly repair and re-decorate, due to moisture damage.



The properties, which are elderly people's homes, were experiencing a problem with large amounts of condensation caused by a lack of natural ventilation. This was because the houses had recently been fitted with double-glazed windows, which reduced the natural circulation of air.

Spenborough Flower Fund is a charitable housing association that provides purpose-built rented accommodation in the Birkenshaw and Gomersal areas of Bradford for people aged 60 years or over.

Jill Myers, from Spenborough Flower Fund, explains: "These are relatively old buildings and we found that once the double glazing had been fitted there was a serious problem of condensation. This was because the buildings were not designed with active ventilation systems, which meant that the double glazing prevented moisture and stale air escaping. The fact that the windows were not often opened, in an effort to keep the properties more thermally efficient, only exacerbated the problem."

Client:	Spenborough Flower Fund
Project:	Refurbishment of existing properties in Birkenshaw, Bradford
Ventilation:	Heat recovery ventilation (MVHR) system
Heating system:	Gas central heating
Local conditions:	Recently fitted double glazing has reduced natural ventilation.
Issues:	High levels on condensation resulting in a need for ongoing maintenance and redecoration

"The ADM Systems' engineers carried out a full assessment of our needs and then recommended an appropriate system. Fitting was very straightforward and they were able to complete the job without any problems."

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Moisture forming on the walls due to the condensation meeting the cooler surface was a particular concern for the housing association as it was causing the paint to peel as well as damaging the fabric of the building.

The MVHR system was able to alleviate this issue because it reduces relative humidity to below 60 per cent.

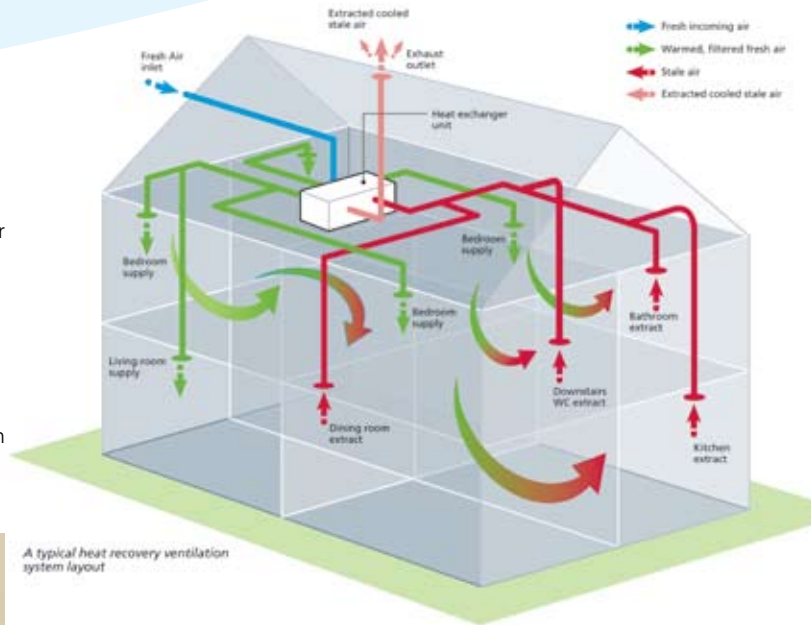
Jill Myers explains: "The MVHR systems from ADM solved the condensation problem overnight, and the fact that it saves on heating bills made it a perfect solution for these properties."



Damage resulting from condensation can create a need for ongoing maintenance and redecoration. Left unchecked, it can eventually damage the fabric of the building itself.

The MVHR works by a series of ducts that collect stale moist air from inside the house from areas such as the kitchen, laundry and bathrooms. This stale contaminated air then passes through the MVHR unit and is exhausted to the outside. Clean fresh air is simultaneously 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 MVHR systems fitted in the Birkenshaw properties are able to capture over 70% of the energy from the outgoing stale air before delivering it as warm filtered, preconditioned air into the living areas of the property through the ducting.



A typical heat recovery ventilation system layout

Fitting of the MVHR systems in the Spenborough Flower Fund properties was carried out by ADM Systems' engineers and as Jill explains: "This really couldn't have been easier. The engineers carried out a full assessment of our needs and then recommended an appropriate system. Fitting was very straightforward and they were able to complete the job without any problems. The residents also really appreciated the fact that ADM Systems was able to install the units without the need for any structural alterations."

ADM Systems are leaders in the field of air management and supply a range of systems to public sector housing providers that help meet the latest regulations, in addition to providing healthier, comfortable and more energy efficient homes.

HEALTH ISSUES ASSOCIATED WITH CONDENSATION

House dust mites are a particular problem in houses with damp conditions caused by reduced ventilation and high levels of condensation. They also thrive where there is high relative humidity caused by cooking, clothes drying, bathing and showering.

The detritus from house dust mites and mould spores are potent airborne allergens. Prolonged and repeated exposure can lead to asthma, the severity of which intensifies with increased relative humidity. Prolonged exposure to damp humid conditions can also lead to rhinitis, bronchial conditions and other breathing related problems.

Reducing relative humidity by fitting an MVHR system can therefore become an essential part of creating healthier homes.

ADM Systems
Ling Fields, Gargrave Road, Skipton
North Yorkshire BD23 1UX
t: 01756 701051
f: 01756 701076
e: info@admsystems.co.uk

www.admsystems.co.uk

