

# case study



## Self builder creates a healthier living environment for his family



A heat recovery ventilation (MVHR) system from ADM has proven to be an excellent choice for one household in Derby. The main reasons the Grogan family opted for heat recovery ventilation were to reduce window condensation as well as benefit from clean fresh pollen-free filtered air.

Due to the size of the property (560m<sup>2</sup>), it was considered more beneficial to install three units in order to sustain the necessary airflow rates and reduce the potential attenuation issues which may have arisen from using larger ducting and a single unit. Two of the units installed were SAP Appendix Q approved Lo-Carbon Sentinel Kinetic Pluses which are capable of recovering up to 92% of the heat generated within the property. The units came complete with a summer bypass as standard which provided the family with a more comfortable room temperature (as the internal and external temperatures allow). The system also incorporated an integral sensor which reacts proportionally to changes in humidity. For the annexe a smaller Sentinel Kinetic unit was installed.

Fitting a whole house heat recovery ventilation system is one of the most effective ways of reducing relative humidity to below 60%, minimising condensation, whilst at the same time addressing the problems associated with mould growth and dust mites. Systems are capable of recovering over 90% of the heat from the outgoing stale air, before feeding it back into the property as warm, fresh, filtered air. Reusing this heat, which would normally be lost to the outside, creates a much more sustainable building.

The result? A much healthier living space for the Grogan family. The first night after the system was fitted Mark Grogan commented that it was **the best nights sleep he has had in a long while!**

*“The benefit has to be truly a healthier environment for my family to live in.” Mark Grogan*

## The heat recovery files

Client:	Mark Grogan
Architects:	Arbor Design
Project:	New Build
Ventilation:	3 heat recovery ventilation (MVHR) systems

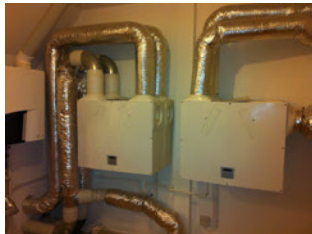
*“ADM have been very professional throughout the whole process. Their engineer was very helpful indeed, a real conscientious guy and a credit to the company.”*

Mark Grogan



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Mark also commented on ADM's professionalism singling out one staff member as being "a really conscientious guy and a credit to the company"!



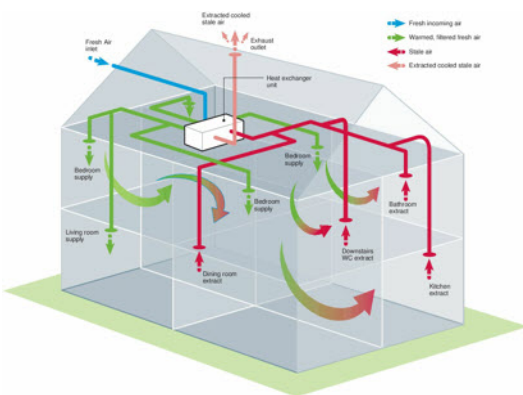
The two Sentinel Kinetic Plus units located within the roof void in the main part of the house

ADM offers the widest selection of brand-leading heat recovery ventilation systems in the UK. The fact that they are not restricted to offering a single manufacturer's brand enables them to provide customers with independent advice on what system is best suited to their property. Mark Grogan is amongst a growing number of customers who have benefited from this service.

## How does MVHR deliver energy efficient, effective ventilation?

The heat recovery ventilation system installed at Mark Grogan's property works by a series of ducts that collects stale moist air from inside the house from areas such as the kitchen, laundry and bathrooms.

This stale contaminated air passes through the MVHR unit and is exhausted to the outside. Clean 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.



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## Side building and garages



## Why effective ventilation matters?

Good ventilation helps to create a healthier environment for you and your family. It works by removing polluted and moisture-rich air found in the home, and replaces it with fresh air taken from outside.

Ventilation minimises or even eliminates the effects of dust mites for those who suffer with asthma and other respiratory problems.

Moisture in the air can lead to condensation and mould growth. House dust mites flourish in damp conditions, which can aggravate asthma and other health issues.

Construction materials, paint, cleaning products and carpets all used in the home give off harmful Volatile Organic Compounds (VOCs).

Radon is an odourless gas that comes from water, soil and rocks. It is harmless in the outdoor air, but when trapped within a dwelling can be extremely dangerous to your health.

Everyday odours from cooking, domestic pets, our bodies, toilets, Environmental Tobacco Smoke (ETS), circulate around the home.

Potentially dangerous gasses, including carbon dioxide and carbon monoxide, together with ETS, pose serious health risks. Airborne pollen from trees, grass and flowers, which circulate around the home, can cause debilitating symptoms for hay fever sufferers.

 adm systems  
fresh air by design