

Why Retrofit for life?

Richard Williams, EnviroVent's Social Housing Director, identifies the challenges when it comes to specifying energy efficient ventilation solutions for retrofit projects whilst looking at cost effective products for the long term future.

The UK Government has set itself an ambitious goal to try and achieve an 80% reduction in carbon emissions by 2050. According to researchers, homes account for 25% of the nation's carbon output and the Climate Change Act, which came into force in November 2008, will never be achieved unless existing properties are targeted via a mass-scale retrofit operation.



Today's Building Regulations demand energy efficiency to be built into the fabric of new homes, but what about the older, leaky properties whose method of construction can be poles apart from the modern drive towards energy efficiency? In Britain we have a rich assortment of housing, ranging from Georgian town houses to trendy city apartments. What's more, according to the English Housing Survey (EHS) out of the 22.3 million houses in the UK, 4.8 million were built before 1919, out of which a surprising 254,000 form part of the country's social housing stock.

In 2009/10, the Technology Strategy Board implemented the Retrofit for the Future programme, worth around £17 Million, to get the retrofitting of the nation's social housing stock underway.

Long term investment verses limited funds

In 2011 we find ourselves in a situation where economic uncertainty, funding cuts, unemployment and rising inflation have become regular headlines. Social landlords have registered concerns over the proposed Welfare Reform Bill and the introduction of Universal Credit, the result of which could be another unwelcome blow to the monthly cash flow. Local authorities and housing associations are having to work with much tighter budgets but are still expected to achieve the same standard. Strapped for cash Asset Managers are left with the dilemma of long term investment verses limited funds, and with regard to essential maintenance, just where do you draw the line?

Prevention is better than cure, and it certainly rings true when it comes to ventilating a property. The Royal Institution of Chartered Surveyors (RICS) has condensation at number 2 in its top 10 list of building defects, whilst the BRE (reference the English House Condition Survey 2007) estimates that it costs on average £5000 to restore a property suffering from a Housing Health & Safety Rating System (HHSRS) category 1 failure caused by damp or mould.

Housing stock must be maintained without compromise to a decent standard and certain things such as ventilation are vital to the tenant's well being. There is the old adage, "If you buy cheap, you pay twice" and, in this age of uncertainty, it is sound advice. In terms of retrofit ventilation, paying a little more for a product which is energy efficient and built to last (preferably one which is backed-up by a long term guarantee) should in theory save you money for many years to come.

Look for applications which are beneficial both to the tenant and the landlord, and ones that tick all the boxes as far as sustainability is concerned. Benefits to the landlord should include rapid and easy maintenance, whilst at the top of the list for tenants should be products which consume the lowest possible energy and have the ability to run quietly and efficiently.

Ventilation suitable for retrofit

Widely used in new build developments, heat recovery works by removing moisture laden air from the wet room areas of the home; it then extracts the heat from the air before expelling it out to atmosphere. The heat, which would otherwise be lost at extraction, is used to preheat fresh air which is delivered into the living areas of the property. In terms of energy efficiency heat recovery makes sense and recycling heat which would normally be wasted is a very attractive proposition. However, installing heat recovery (MVHR) requires extensive work, duct runs will need installing into various rooms in the property, causing disarray and redecorating issues. This should not be an issue for major retrofit projects where a variety of improvements are being carried out.



A good example of retrofit on a larger scale is the New Barracks estate in Salford, where 79 of the council owned Edwardian town houses recently underwent a major refurbishment as part of a green retrofit scheme. The estate, managed by Salix Homes and the New Barracks Tenant Management Co-operative, had a varied programme which included insulating external walls with 50mm Spacethem®, replacement boilers, re-wiring and installing energy efficient ventilation. A heat recovery system developed especially for retrofit projects was chosen by the tenant's Co-op for its sustainable characteristics and energy efficient ventilation.

Good news for tight budgets

Positive Input Ventilation (PIV) is a whole house ventilation system which works by delivering fresh, filtered air into a property at a continuous rate, it is ideal for small or large retrofit schemes.



This method of ventilation is good news for those trying to juggle a tight budget as PIV offers a very cost effective solution, it is quick and easy to install with the added benefit of no disruption to the existing property as extensive ductwork is not required. PIV will gently ventilate a property all year round, eliminating condensation and mould problems. Furthermore, this type of ventilation is exceptionally energy efficient, saving up to 10% of annual heating costs, and can offer significant health benefits to sufferers of respiratory problems such as asthma.

For projects on a smaller scale you could consider installing a single room heat recovery unit. These can be very beneficial for kitchens and bathrooms. There are some highly efficient applications on the market which recover up to 80% of the heat that would normally be lost at extraction. Perfect for the refurbishment of these smaller areas as single room heat recovery units do not require duct runs, and can utilise existing wall sleeves - which makes installation easy.

Like our existing housing stock, retrofit programmes are going to become a common practice and are going to be around for a long time into the future. Products which offer longevity, energy efficiency and cost effective savings in the long term should really be considered over cheaper applications that will need replacing in 2 to 3 years time.