WHITE PAPER

Problems with Cavity Wall Insulation

By Steve Hodgson,
Chief Executive of The Property Care Association

As the lid slowly comes off the ill-conceived but well intentioned Green Deal and Eco schemes, we should try and consider the fallout and what this really means for those who have been sold the benefit of subsidised wall insulation.

The Background

Before we look at the consequences, it is worth looking at how we reached our current position. The retrofit insulation industry has faced the same seemingly intractable problem many times. Insulation providers struggle to convince people to spend their own money on good quality, well designed and properly installed energy saving measures.

For almost two decades the retrofit insulation industry has grown quickly and then contracted with the ebb and flow of government inspired subsidy. The promise of vast amounts of funding delivered as grants has created a “gold rush” mentality amongst speculative contracting organisations. They know as one scheme starts they must work hard to grab as big a share of the pot as quickly as possible. They know that the latest scheme is likely to end on a fixed date and that they will probably have to shrink fast, dump staff and hang on as one funding stream dries up and another goes live.

This merry go round of “boom and bust”, fuelled by short term local or national initiatives, sets a very particular scene. Many who enter the market understand the cycle, and those that don’t understand the merry go round soon learn.

As a new initiative rises from the ashes of the previous scheme and money becomes available, firms know that they must move very quickly to cash in. They expand rapidly, hiring and growing to meet demand. The contractor is tasked with attracting homeowners to the grant funding, so understandably they recruit commission motivated sales teams.

Quality of installation, the building’s suitability and the particular needs of the site become secondary considerations. Volumes, speed and meeting demand and making money quickly, become the drivers for contactors. It is our view that the pursuit of volume sales is seldom a reliable driver of quality.

A lack of quality in both the installation and the design of retrofit insulation is inevitable in the circumstances. It is the result of the false market created by government intervention, the push to spend cash, grant systems that reward volume not quality, an almost total lack of verification and quality assurance. All is made worse by an installation industry that anticipates its own demise.

It seems mad that the systems created came about when customer care and quality were a primary consideration for the legislators when the Eco and Green Deal schemes were being built. Perhaps anticipating problems and in an attempt to provide a safety blanket for consumers, the Cavity Insulation Guarantee Agency (CEGA) was created. This warranty protection scheme was billed as the way to protect homeowners if problems occurred with cavity wall insulation. Unfortunately with the number of company failures, lack of new money and growing numbers of claims, things may not be working out as intended here either, but that's for another commentator.

So where does the blame lie? In our view the problem sits with the funding models. Contractors, consumers, utility firms and homeowners are all acting as one would expect. The push to spend and the drive for volume is never going to create a sustainable, quality lead industry that promotes trust, incentivises research and long term investment, or the development of a sense of social and corporate responsibility.

The Damp Problem

When retrofit cavity wall insulation is installed into a property that is located or built in a way that means it should not have the cavities filled or if the work is undertaken incorrectly, the first and most obvious sign of a problem is almost always internal dampness.

Most homeowners will be blissfully unaware if cavity wall insulation has not been installed correctly. They will not know if it is over-packed, under filled, where it has slumped, where areas have been missed, vents have been blocked or obstructions missed. This is because even though the energy savings won't be as advertised there is no obvious sign of any defect. Those that are aware of a problem with the insulation within the walls will almost certainly have been put on notice with the appearance of dampness within their home.

On occasion the use of cavity wall fills should have been a part of a suite of measures to improve thermal performance. However, all too often it's the only measure that's been utilised.

Where cavities are discontinuous or are crossed by solid elements such as floor slabs or parapets, “cold bridges” can be left. Before the insulation was installed the temperature difference between these bridges and the wall may have been relatively small. After the cavities within the walls are filled with insulation these uninsulated elements may be significantly colder than the surrounding walls. This coupled with the effects of a draughty house, can create the right conditions for condensation and mould, often where it’s not been seen before.

We have also seen a growing number of properties where no defects exist with the building or the new insulation, but owners are reporting new problems with damp. In these instances, it has been found that the insulation has successfully stopped both warm air and moisture escaping. Without reintroducing air exchange through controlled ventilation the wet air has nowhere to go. Subsequently the humidity levels rise and mould growth is almost inevitable.

Nothing set out in the examples above is particularly insightful. Every link in the chain of events has been fully understood for decades. In fact, a great deal was done to try and promote responsible and accountable cavity insulation work.

Registration and certification schemes became a requirement for many contractors, warranty schemes became a mandatory requirement of the consumer offering and codes, protocols and standards were written to offer a framework for governance.

Unfortunately however many of the schemes grew too fast. They were un-policed, unaccountable and in some cases inadequate for the situation. In 2010 the PCA published a “White Paper” and in this document we identified the total lack of design liability that was missing from the retrofit insulation schemes.

It was our view then, as it is now, that too much emphasis is placed on the theoretical performance of the insulation. What is needed are professionals to assess the property and design the best possible energy saving measures that are commensurate with the style, condition and occupation of the building. Not salesmen with computer models motivated by the need to secure a job.

Another pitfall that the legislators attempted to close out was assuring the quality of the technicians installing the product.

Unfortunately no-one stopped to ask if the building and style of occupation was right for the kit the firm could sell, or what happens if good technicians, paid on results with a crushing workload and little by way of quality control, are released to do a job that is all but invisible when it is finished and the dust is swept up.

In conclusion, it is arguable that properties that are now seeing the effects of water penetration, condensation related mould growth and cold bridging are not doing so because the insulating material has failed but because the specification, process or product that was delivered was wrong for that building in that location or that this installation is faulty.

The rise of opportunistic, insulation removal companies is another symptom of a developing problem. It is true that in some circumstances the removal of cavity fills is the right thing to do but this conclusion must be based on fact, evaluation and knowledge. It is often possible to fix the building, the ventilation or the insulation. Removal of insulation can only be justified if the evidence dictates it.

We take no satisfaction from the fact that we predicted the current situation. Needless to say we now think that we massively underestimated the scale and speed at which problems would develop. That said, we have not sat back. We have worked hard to promote the skills, knowledge and understanding that will be needed to inspect, diagnose and remedy the damp problems that are now being reported by homeowners, tenants and landlords across the country.

About The Property Care Association

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