

## ATTITUDES TOWARD PAS 2035 POSE A SYSTEMIC RISK TO THE DECARBONISATION AGENDA

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**You might have read about retrofit (energy efficiency) measures installed in homes failing over the past few months in news articles like the following -**

<https://www.bbc.co.uk/news/articles/c70kr365d8xo>

**Baily Garner have been auditing PAS 2035 works over the past month on behalf of some of our clients; the first thing you should know, is that these failures are occurring not because of the standard, but due to a minority of installers disregarding them to make a quick buck.**

It is also worth noting that you have heard about this mainly because TrustMark has served its purpose as an auditing and monitoring authority by suspending accreditations until companies can prove they have processes in place to address their failures, as well as the teeth to ensure remedial work is carried out to rectify them.

One consideration to keep in mind with the BBC article is that some organisations failed on some simple PAS 2035 paperwork process requirements; this reinforces the necessary processes, accreditations, warranties and guarantees are being monitored by Trustmark as a Quality Assurance body. In effect, it is like an independent body making sure the manufacture process for a product is satisfactory and the guarantee holds weight.

On February 12th, the Energy Security and Net Zero committee discussed two examples of very poor retrofit practice, driven home by first-person accounts from those affected. <https://parliamentlive.tv/event/index/e0795255-30eb-4ee3-adee-eb0d02e99ce9?in=16:17:54>

Although harrowing, one of these was related to practices before the PAS 2035\* framework was released. Another related to an EWI install in 2022.

What I found particularly striking was the commentary provided by Damian Mercer, a manager at Cavity Extraction Limited. His business is extracting and remediating poor Cavity Wall insulation – clearly a lucrative income stream for him – but while discussing the bewildering number of poor installations (which could be approximately 10.5m in UK and Wales) and how they have affected people’s lives, he came across as very concerned.

These failed installations affect those in fuel poverty the worst, as they are often forced to choose between saving money to remedy housing defects, heating their homes or putting food on their tables. It was clear from Damian’s words that he cares about these people, and his feelings reflect most within the industry.

Stories like the two discussed were generally only heard before PAS 2035, and it was certainly the belief of my colleagues and I at Baily Garner that the standard protects us from failures like these.

Not anymore.



**A good example of fault free retrofit installation we have managed**

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Mr Zak Ashraf, the son of a recipient of faulty EWI installed in 2022, highlighted the defects driven directly from a poor EWI install during the committee session referenced above. The install led to fungal growth, which was later discovered to be dry rot. As a Chartered Building Surveyor, for me, dry rot is up there with the most severe of defects due to its effect on the structural elements of a dwelling and the associated remediation cost. In this instance, Mr Ashraf noted the remedial works would cost £100,000. This defect has still not been resolved since the installation. Nobody is doing anything, and as a result he has got to the point of speaking at a government committee before any action has been taken.



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The PAS 2035 process ensures consideration and quality. This is clear in the document, and when followed, this is achieved. There is even a monitoring and evaluation section that enables reflection on performance and provides a framework for rectifying issues. As all government funded domestic retrofit works need to be compliant with the standard, following it should completely negate these issues.

This can only mean one thing; the processes set out in the standard are not being followed. At Baily Garner, we have experienced a negative attitude to PAS

2035 from some individuals. The standard is often met with scrutiny as it adds cost to a project without the tangible benefits of money spent. Where there is not necessarily a 'thing' being bought as part of a PAS 2035 specialist role, the spending is difficult to justify at a board level. The trouble is, this opens the possibility for Retrofit Installers to persuade providers that the standard is unnecessarily 'bureaucratic', and that following that or PAS 2030 (the Retrofit Installer standard) adds an equally unnecessary cost to a project.

To make matters worse, these instances where the standards are disregarded are not isolated; we have read strategies where this opinion has bled through to a client's long-term vision, as Retrofit Installers are often leant on by clients for a view as they create a decarbonisation strategy. It is my opinion that this attitude filters down to smaller Retrofit Installers specialising in one-off installs. The standard is seen as a box-ticking exercise to make sure they get paid, and so it loses meaning. This is the crux of the issue – if the role is seen as meaningless, of course there is no point in having it.

With the emphasis placed on collaboration within the sector, and as government funding has increased to address the need to retrofit properties on a larger scale, there is a risk that attitudes like the above could pervade more schemes along the decarbonisation journey. The result could be more failures like those documented in recent months but on a much larger scale, and that's why, as a sector, we need to challenge these attitudes.

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This challenge boils down to us conveying a systematic understanding of the reason for the standard. It is about quality. It is about accountability – the exact same reason that there is a ‘Golden Thread’ approach to Building Safety following Dame Judith Hackitt’s post-Grenfell report. If you raise this concern, the response is often “we have Quality Assurance Protocols in place”. This is a great start, but these protocols vary from contractor to contractor, while PAS 2035 and 2030 are constant and applicable directly to the works taking place.

The findings of our audits at Baily Garner are quite concerning; but this does not mean we should stop retrofitting to the PAS 2035 standard. In fact, the issues found could have been avoided in every instance had the standard been followed, and the impact on residents avoided completely.

### WHAT HAVE BAILY GARNER’S OBSERVATIONS BEEN?

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**1.** An end user did not know how to use their new, high retention storage heaters, which were installed on a single-tariff meter without any guidance from the Retrofit Installer or Retrofit Coordinator/ Retrofit Advisor. As a result, they were paying more for their heating than they were with their 50 year old oil boiler. This should have been a simple conversation about meter types, an installation demonstration and advice to end-users – all of which is captured within the relevant standards. This is a really simple solution and neglecting it has cost the end user twice the usual amount of their normal energy use.

**2.** I visited a property that was heavily affected by black mould in most habitable rooms (though not to the same extent as Mr Ashraf). The property had

undergone the installation of External Wall Insulation, but on inspection, there was no consideration for ventilation whatsoever: No background ventilation, vents covered up, old extract fans that were either not functioning or past their best, windows kept closed and no door undercuts. The humidity of the property hit me as I entered. PAS 2035 requires an assessment of ventilation and would have needed an upgrade in this instance, where the building fabric was upgraded. The neglect of the Retrofit Installer (and potentially the Retrofit Coordinator) here caused a potential health risk.

**3.** I visited a property where an Air Source Heat Pump had been installed. The anecdotal evidence from the end user was that their ASHP (again, replacing an old trusty oil boiler) had increased their month-on-month energy bills by 400%. This was a retired couple on a low income who now faced an annual bill of £6,000 for energy alone. Yes, this is anecdotal, but if it is even a quarter true, the installation that was meant to save energy and reduce bills has simply not worked. Everybody they contacted since this point grew tired of their complaints and accordingly have just started ignoring them. The issue here, again, was simple: the Retrofit Installer had not calculated the radiators properly and kept the old ones in place, but installed a new way of heating the property that would need a completely different sized set of heat emitters. This should have been covered at the design stage by either the Retrofit Designer or Retrofit Installer, and again, been overseen by the Retrofit Coordinator. It is also arguable this should have been caught by Quality Assurance body MCS\* (Microgeneration Certification Scheme).

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## HOW DO WE INSTIL CONFIDENCE IN PAS 2035?

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**A clear, single explanation of the roles, agreed and circulated by every participant in the process.** Every client must understand, in layman's terms, what each role entails. If the Retrofit Installer is left to provide this explanation, it will be open to their interpretation and will vary from client to client and installer to installer.

**A respect for the process.** PAS 2035 should not have to change because it is inconvenient. It is there as a protection for end users and clients; just like a building regulation or any other standard. David Pierpont of the Retrofit Academy makes no secret of his concerns about the level of competence that varying qualifications for Retrofit Coordinators provide.

There needs to be a minimum standard, and Retrofit Coordinators need to stand up for what is right. If they are not adequately qualified to do this, the likelihood of failure increases. This also covers Retrofit Coordinator 'box tickers'; we often see this dynamic on failing projects where there is an office based Retrofit Coordinator who relies on the standard without any regard for the wider project.

The Retrofit Coordinator is a project management role and project managers need to be pragmatic and adaptable for a project to work; neither of these can be reconciled with a 'computer says no' attitude.

### **Independent, conflict free PAS roles.**

The Retrofit Coordinator signs off the project. The standard does not prevent the Retrofit Installer from acting as the Retrofit Coordinator. There needs to be clear delineation between the 2 roles, otherwise the perception of PAS 2035

as a 'box ticking' exercise is simply reinforced.

Mr Ashraf referred to this issue in his mother's case, arguing:

*"You would be better off living in a cold house and paying higher bills, because the industry is not regulated properly. Everyone is marking their own homework, so they are just patting themselves on the back and making thousands of pounds, and people are being left to deal with it".*

Clearly, in this specific case, the conflict of interest has caused a monumental failure. This needs to change by having clearly independent and well qualified parties managing the installation and coordination processes.

**Clear processes for escalation.** In the instance of failure, there needs to be a sole point of responsibility to escalate issues. In my third example above, the end user was bounced between MCS, the Retrofit Installer, TrustMark, and other parties. None of these helped and just perpetuated a miserable time. Mr Ashraf noted that he takes part in civic society, writes to his local MP and local councillors, and is part of various residents' associations. He should not have found navigating this system as difficult as it has been, having reached out to many people and still the issue stays unresolved three years later.



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Mr Ashraf acknowledged there are many like him but who do not have the privilege of the platform given by a government committee to discuss the topic. How do we find ourselves in a position where insurance backed guaranteed work, undertaken by vetted, accredited contractors has not been resolved in three years? Mechanisms must be introduced to stop this. In reality, does TrustMark's power stretch far enough? We have a propensity to wait for a crisis before we legislate in the UK; should we be looking forward and having TrustMark act as an ombudsman?

**Integrity.** If costs increase because of ventilation or other previously unforeseen issues (that frankly should not be unforeseen if an adequate Retrofit Assessment is undertaken and referred to), this needs to be communicated. Retrofit Installers cannot stay quiet, ignore the issue, take the money and run. That is why we find ourselves with Mr Ashraf talking about dry rot in his mum's property from a routine insulation install. The reality here is that regardless of whether or not PAS 2035 was observed, following a quality assurance route would carry a cost, but it would still be the right thing to do.

Personally, I really hope, for the good of a well-intentioned standard and the decarbonisation agenda itself, that attitudes displayed by the minority change. We are at the beginning of a very long decarbonisation journey for our existing housing stock. On this journey, we face opposition to decarbonisation from many organisations and individuals who will grab onto any reason possible to lobby against our net-zero ambitions. Frankly, we are giving them fuel that we simply do not need to. As an industry, we can and need to do better.



**Ben Nixon, Senior Associate Partner**

**National Retrofit Lead**

[ben.nixon@bailygarner.co.uk](mailto:ben.nixon@bailygarner.co.uk)

020 8294 1000

**Ben Nixon** is Baily Garner's National Retrofit Lead. As well as performing PAS 2035 roles on some of the country's largest retrofit projects, he audits properties on behalf of clients to determine the quality and compliance of installed measures and assists with data gathering and asset management planning to inform future retrofit work.

**\*PAS 2035** is the standard to remedy ongoing governance issues determined through the 'Each Home Counts' review, released in 2016 following examples of poor quality standards in the energy measures sector.

**\*Retrofit Assessor (RA), Retrofit Coordinator (RC) Retrofit Designer (RD), Retrofit Installer (RI) and Retrofit Advisor (RAdv)** are all roles created under PAS 2035.

**\*MCS (Microgeneration Certification Scheme)** is a quality assurance scheme that certifies products and installers for renewable energy technologies, such as solar panels, heat pumps, and wind turbines