



THE
RETROFIT
ACADEMY

PAS 2035

What is it and what does it mean for you?

In May 2019, the British Standards Institute (BSI) published a document called BSI Publicly Available Specification (PAS) 2035. You will not have heard about this on the national news. However, if you work in the energy efficiency sector, it will have a huge impact upon you, your clients and suppliers. The purpose of the document is to create a framework for deep retrofit projects that are high quality, safe and fit for the future. It is a long-overdue response to the Each Home Counts Review (2015-2017). This article clarifies the impacts and timescales of PAS 2035 and should get you thinking about how to prepare for what should be the most radical shake-up of the energy efficiency industry in a generation.

The government department responsible for the Energy Company Obligation (ECO), the Department for Business, Energy and Industrial Strategy (BEIS), took the view that until these issues were resolved, large-scale retrofit was not viable. The industry would not reform itself, and therefore new, mandatory working practices would have to be introduced. Consequently, BEIS sponsored BSI to create new guidance for the sector and Working Groups were formed to shape it. Dr Peter Rickaby, a long-standing retrofit expert, was appointed to head this up as Technical Author. Working Groups comprised of professional, membership training and certification bodies, a broad range of expert consultants, architects and other individuals.

What is PAS 2035?

Contrary to popular belief, PAS 2035 is not a new BSI Standard – it is a framework for project delivery. It addresses the fundamental structural problems that blight many energy efficiency projects, no matter how well-intentioned the participants may be. Problems such as:

Defects

10% of all solid wall insulation projects resulted in a Type-1 Fail (Ofgem 2013)

Unintended Consequences

Health and social problems made worse by retrofit, not better

Shallow Retrofit

Availability of funding resulting in the installation of single-measures at the wrong time and place

Accountability

Rules of the game meaning the buck is continually passed on, resulting in litigation

Poor Design

Low profit margins exclude building professionals from engagement in retrofit

Performance Gap

Predicted energy savings not delivered in practice

PAS 2035 and TrustMark

In parallel to the PAS 2035 process, BEIS also supported TrustMark to prepare itself to become the established Quality Mark for the sector. Businesses operating under the TrustMark would have to comply with a Code of Conduct a Code of Practice and a Customer Charter. The Code of Practice adopted by TrustMark is PAS 2035, as well as PAS 2030 (2019) for Installers.



TRUSTMARK
Government Endorsed Quality

TrustMark

Phil Mason, Head of Compliance at TrustMark, tells us about his hopes for the energy efficiency sector under PAS 2035.

What does TrustMark aim to achieve in the energy efficiency sector?

“TrustMark is here to improve consumer protection and peace of mind. By using a TrustMark Registered Business to carry out work in and around their homes, consumers are selecting a business that has made a clear commitment to customer service and trading practices, and that their technical competence has been independently assessed within the context of the Framework Operating Requirements.

TrustMark also aims to enable Registered Businesses to thrive by championing them on the TrustMark website and other marketing channels, and by actively connecting them with consumers seeking services through the customer portals.

By the TrustMark delivery of the sum of these objectives and some offerings that are under development we anticipate improved consumer confidence and growth in the uptake of the services provided by the energy efficiency sector.”



Phil Mason
Head of Compliance
at TrustMark

How do the TrustMark and PAS 2035 fit together?

“TrustMark is respectful not to prejudge the outcome of the ECO3 ‘Improving Consumer Protection’ consultation process, however, we are preparing for a positive outcome.

By design the PAS has been written with the principle of focusing on the quality of outputs at all the stages rather than being concerned with certifying people; indeed, it is not possible to be certificated to PAS 2035. Likewise, the PAS has a major focus on specifying a holistic approach to the retrofitting of dwellings, better defining qualification, activities and outputs of the individual retrofit roles prior to the commencement of the physical installation. All of this is in support of the PAS 2030 certified installer being able to have confidence in the design they are supplied to quote against and install from.

On this basis TrustMark has a major role to play in monitoring the compliance of the outputs of the relevant stages. We are in the final stages of delivering the Data Warehouse as one of the recommendations of the Each Home Counts review. The lodgement of key data into the Data Warehouse will be audited for compliance using several methodologies and driven by our developing risk model. We will be able to use our findings to help inform and educate the supply chains in a bid to avoid repeating common mistakes.”

There is a transition period for the industry to gear up for PAS 2035 through to early 2021. What do you plan to do to support companies in this period?

“TrustMark is actively out and about discussing and presenting information about the proposed transition period at every possible opportunity. We will continue with these activities and engage with stakeholders at all levels. We have already produced and published information on our website which is aimed at helping with the understanding of implementation and will continue to build upon this information going forward.”

Where should people go if they have questions about TrustMark and PAS 2035?

“Visit: www.trustmark.org.uk or call 0333 555 1234 where a member of the compliance team can respond to you enquiry.”

To encourage uptake of the TrustMark scheme, the government stated that all users of ECO-funding would need to be members of TrustMark organisations that are seeking to follow a transitional period to allow for preparation, upskilling and business planning. This also requires new legislation to become law. Consequently, a backstop date of 19 months from the date of the publication of PAS 2035 was proposed – which is understood to mean January 2021.

Other businesses not using public funding are able to apply for the TrustMark on a voluntary basis. The hope and expectation are that customers will come to recognise the TrustMark and would check for this in a similar way to how they might routinely check heating engineers were Gas Safe registered.

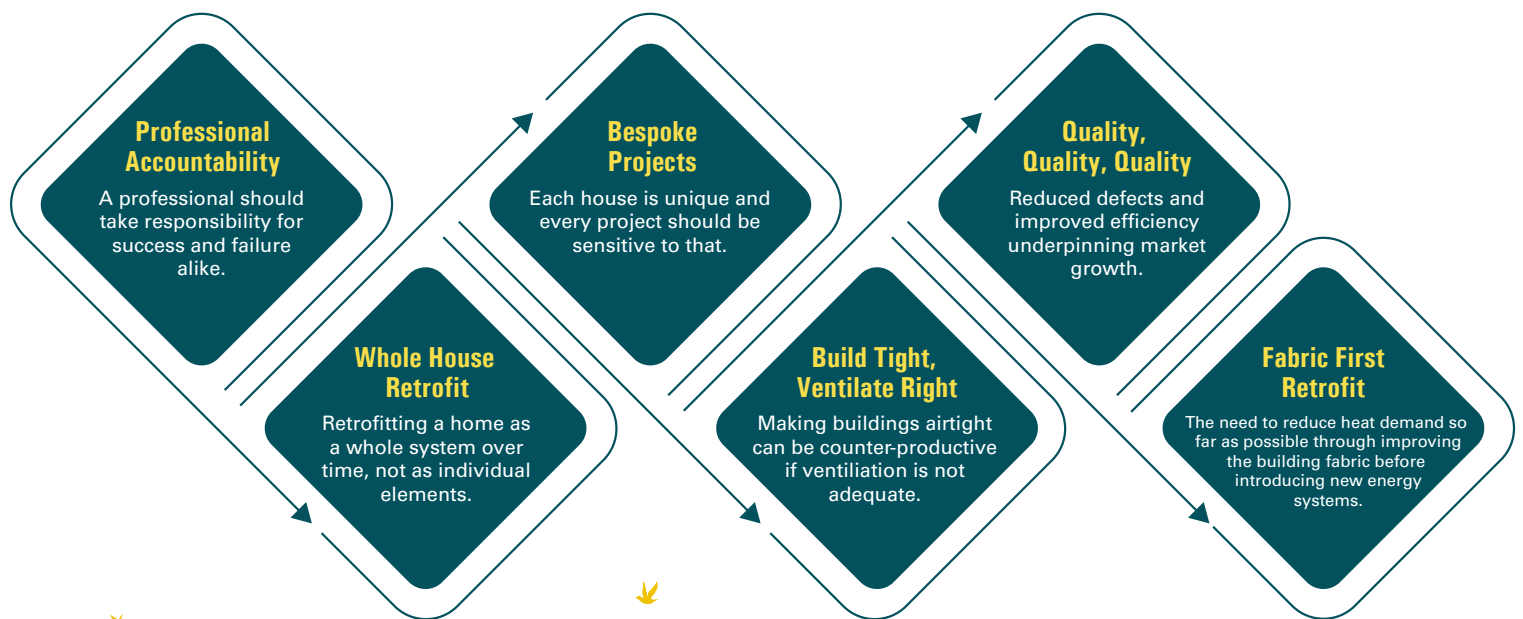
Timeline to implementation



Note: The January 2021 transition date is subject to the passage of the required legislation, and to the outcomes of the consultation recently undertaken relating to ECO 3.

The core principles of PAS 2035 explained

A set of core principles underpin PAS 2035. These are often mistaken for jargon and it is crucial that your business develops a thorough understanding of these.



PAS 2035 – The top 10 impacts

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NEW ROLES

Five new roles have been created with clear responsibilities and accountabilities (see below).

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DEEP ASSESSMENT

The starting point for all projects will be an in-depth assessment of a dwelling, not a routine EPC assessment. The Assessor role is more limited than previously, and specifically excludes specification.

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DATA GATHERING

The Assessor's role will be to collect data, not to specify solutions. Deep assessment will be modelled using full SAP or PHPP (Passive House Planning Package) and fed through to the...

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...RETROFIT COORDINATOR

The kingpin in the new process, who will be responsible for the project complying with PAS 2035.

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RISK ASSESSMENT

All projects will be triaged by the Coordinator according to the level of project risk, and this will determine how much specialist technical expertise is required. A "Measures Matrix" is used to inform the triage process.

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MEDIUM-TERM RETROFIT PLANS

Based on the outcomes of the Assessment, the Coordinator will develop a Medium Term Retrofit Plan bespoke to that property. This will draw upon another key strategic document called an Improvement Option Evaluation, which will outline which measures should be installed in what sequence. This will then be uploaded to the Data Warehouse, so that future residents and owners of the property can access it in years to come and continue the retrofit journey.

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DESIGN INPUT

All projects identified must involve design input. Higher risk projects (Paths B and C) must involve a specialist design professional to ensure adequate detailing and specification.

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SEAMLESS DESIGN AND INSTALLATION

The Coordinator will be responsible for realising the design, with full control over product substitutions, sequencing and inter-team communication.

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SOFT LANDINGS

The Retrofit Coordinator must ensure appropriate commissioning of systems and handover of the property to residents and owners. The occupant must be supported to understand how to get the best outcomes, including reduced bills and intended health benefits.

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MONITORING AND EVALUATION

Every project will be subject to a rigorous regime of testing, monitoring and evaluation. This will allow defects to be identified early, and the Performance Gap to be minimised.

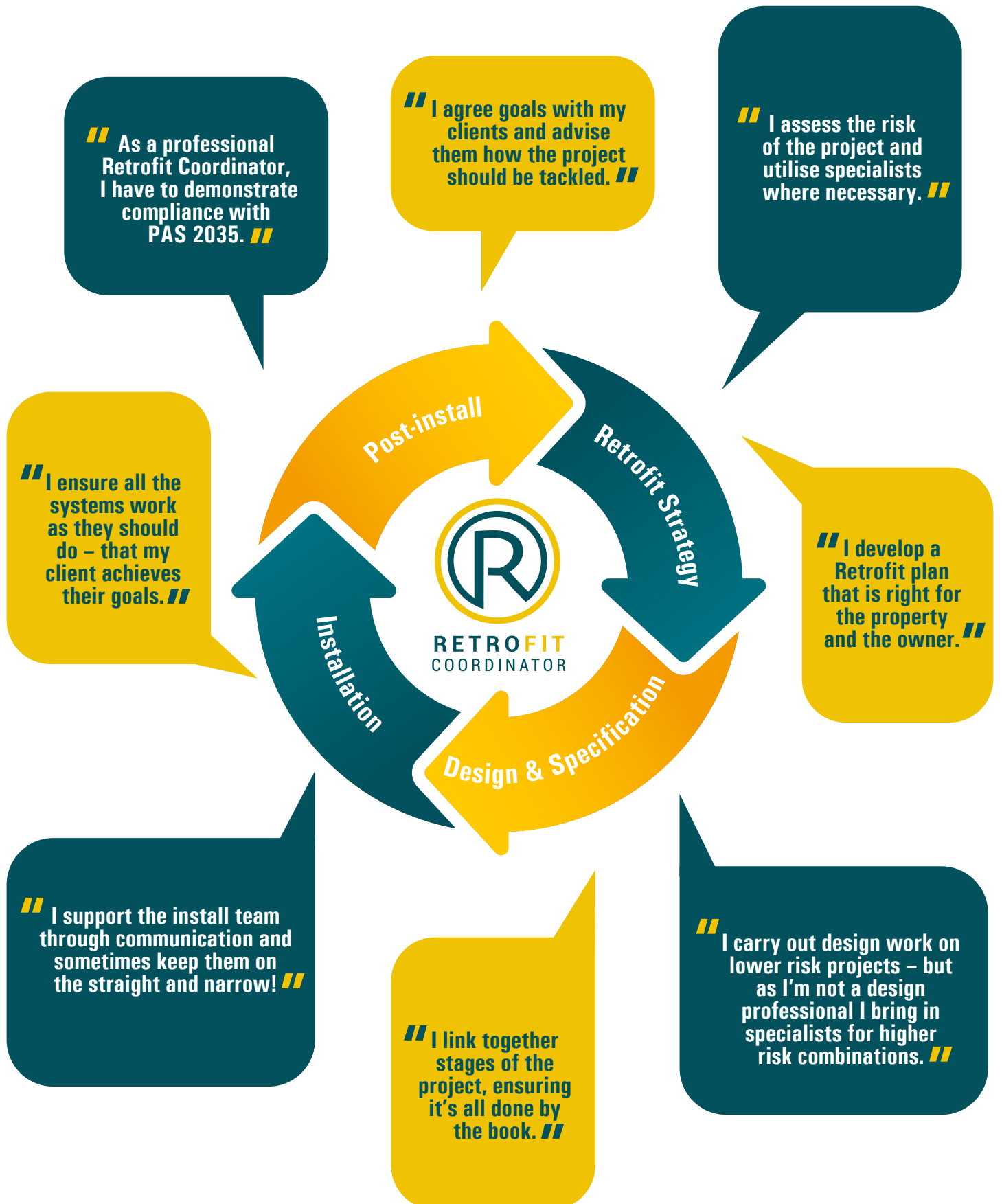
The new roles

PAS 2035 introduces five distinct roles, and outlines what they should do on each project as determined by the assessed level of project risk. The PAS also spells out what accreditations and qualifications the individual must have. These are summarised on page 8.

It is important to stress that the Coordinator's role stretches from end-to-end and is a professional role with full responsibility for demonstrating compliance with PAS 2035. They therefore should have full oversight of both the Installation and Handover phases, working alongside the installer operating under PAS 2035 (2019).



The central role of the Coordinator



Roles, qualifications and accreditations

Role	Role Description	Qualifications Required	Accreditations Required
Retrofit Advisor	Deliver retrofit advice to clients and householders	City and Guilds Energy Awareness and Advice Green Deal Advisor Level 5 Diploma in Retrofit Coordination and Risk Management	Coordinators must be a member of a TrustMark-approved Retrofit Coordinator Scheme (e.g. Elmhurst).
Retrofit Assessor	Carry out Dwelling Assessment and supply data to Coordinator	Level 5 Diploma in Retrofit Coordination and Risk Management (Path A) Domestic Energy Assessor (Path B&C) Specialist Level 3 – 6 awards in traditional buildings (Path B and C where building is 'protected')	Certified-DEA by a UKAS-accredited assessor body (e.g. Elmhurst, Stroma etc.). Members of a TrustMark-approved Scheme.
Retrofit Coordinator	Person with overall responsibility for each stage of the project, sometimes also fulfilling specific project roles for which they are also qualified	Open College West Midlands Level 5 Diploma in Retrofit Coordination and Risk Management. Must also be able to demonstrate prior experience and competence in professional practices such as contract management, project management, customer service etc.	Once qualified, must be a member of a TrustMark-approved Retrofit Coordinator Scheme (e.g. Elmhurst).
Retrofit Designer	Person qualified to prepare a retrofit design	Path A: Level 5 Diploma / MCIAT Path B: As above plus registered Architects, Construction Managers and Building Surveyors Path C: as above plus CIBSE members who also hold the Level 5 Diploma or specialist traditional building qualifications	Professional Membership of CIOB, CIAT, CARE, AABC, RIBA RICS or RIAS
Retrofit Installer	Person or organisation undertaking the physical placement of an energy efficiency measure in an existing building	As per PAS 2030 (2019)	As per PAS 2030 (2019). Must be a member of a TrustMark-approved scheme. Current transition period for those operating under PAS2030 (2017) ends on 31st January 2021.
Retrofit Evaluator	Person qualified to monitor and evaluate the effectiveness of a project and provide feedback	Level 5 Diploma in Retrofit Coordination and Risk Management	Once qualified, must be a member of a TrustMark-approved Retrofit Coordinator Scheme (e.g. Elmhurst).

Who does what in the new process?

Assessed Project Risk	Assessment	Strategy	Design and Specification	PAS 2030 (2019)		Monitoring/Evaluation
				Installation	Handover	
A (Low)	Assessor Coordinator	Coordinator	Coordinator Designer	Installer Oversight	Installer Oversight	Coordinator Evaluator
B (Medium)	Assessor	Coordinator	Coordinator Designer	Installer Oversight	Installer Oversight	Coordinator Evaluator
C (High)	Assessor	Coordinator	Designer	Installer Oversight	Installer Oversight	Coordinator Evaluator



Temporary whilst Evaluators are trained and accredited.
Advanced Evaluation can not be performed by the same Coordinator leading on the wider project.



Indicates "oversight"

What should I do next?

Process Stage	Social Landlord	Professionals	Installer	Energy Assessor
Upskilling	Build your knowledge and understanding of PAS 2035 and how you can integrate it into your asset management strategy. Consider supporting at least one member of staff to become a qualified Retrofit Coordinator so they can lead on the transition.	<p>Consider upskilling to become a Retrofit Coordinator by speaking to The Retrofit Academy CIC.</p> <p>Fill any gaps in your design knowledge relating to retrofit and consider how you could become a Retrofit Designer.</p> <p>Consider training in conservation of traditional buildings.</p>	Decide whether to develop PAS 2035 role competencies in-house or outsource. Otherwise form alliances with retrofit professionals.	<p>Consider upskilling to become Retrofit Coordinator.</p> <p>Gain specialist heritage qualifications should you wish to assess pre-1919 properties.</p> <p>Ensure you understand full- SAP methodology and have the tools to convert RdSAP to full SAP. Companies like Elmhurst can help.</p>
Accreditation	N/A – but be aware of what accreditations your supply chain will need to have by January 2021 if you want to operate under the TrustMark.	<p>If you want to undertake design work on Path C (high-risk) projects, ensure you hold the appropriate qualification.</p> <p>If you want to undertake design work on traditional buildings, ensure you have an up- to-date accreditation in building conservation.</p>	Some installers may offer a turnkey service incorporating assessment, design, coordination and installation. Ensure that you have individuals qualified and accredited appropriately.	Apply to join a TrustMark- approved Retrofit Assessor scheme
Winning Work	N/A	Publicise your new services – professional Retrofit Designers and Coordinators will be in demand	Track tenders that are seeking bids for turnkey solutions.	Ensure your clients know you are an accredited Retrofit Assessor. Keep an eye out for new tenders that specify Retrofit Assessors are required.
Procurement	Brief your procurement team on the PAS 2035 timetable and decide whether to 'go-early'. Remember the PAS is fully available now – you don't need to wait!	Track tenders for professional services related to Retrofit Design and Coordination.	Inform your key customers of the development of new competencies. Where necessary, educate your clients about PAS 2035.	Be aware that clients may procure fresh assessment services when they decide to apply PAS 2035.

Going early – Case studies

Case study 1: Bierce surveying

Bierce offer a diverse range of surveying activities include auditing and technical monitoring for companies involved in energy efficiency measures, Energy Performance Certificates for commercial and domestic buildings, property marketing solutions and PAS 2030 surveys and auditing.

Neil Bowles, Operations Director at Bierce explained how they are gearing up for PAS 2035.

What have you done to start preparing for PAS 2035?

“We realised that PAS 2035 was going to have a huge impact on our sector. We started by having full and early engagement with TrustMark, Elmhurst and The Retrofit Academy. We decided to organise a briefing event for the industry to cover the new PAS standards.”

We have now developed “myPAScompliance” to support the industry through the changes. This is a comprehensive client-led support and advice platform.”

Why have you decided to train some of your team as Retrofit Coordinators?

“We wanted to fully understand the new processes and to support the delivery of the new PAS – as well as developing our staff’s development. Our aim is to be able to commercially assist the industry and deliver against the new standards. We also wanted to show and demonstrate support to the industry.”

What impact do you expect PAS 2035 to have on your business and the wider industry?

“TrustMark’s custodianship of monitoring will change the way we operate Technical Monitoring by channelling work through their risk model. This will no doubt have an impact and change to the way technical monitoring is carried out.”

The industry will need assistance to comply with the changes which gives us an opportunity to assist. Bierce will seek to support the supply chain up-front through our “myPAScompliance” framework.

There is an understandable fear of increased cost and additional layers of bureaucracy or ‘red tape’. Many in the industry are sceptical about the PAS on this basis but Bierce is positioning itself to provide support, guidance and advice.”



BIERCE

Neil Bowles
Operations Director
at Bierce



Case study 2: City Energy

City Energy are a well-known installer based in south Wales. Technical Director, Elinor Jenkins explains how they are gearing up.

What have you done to start preparing for PAS 2035?

"Following reviews of the consultation, we have taken the decision to place key members of our team on the Level 5 Retrofit Coordinator course. We are reviewing all elements of the roles required within PAS 2035 and are confident that City Energy Network will be compliant and operating to the PAS 2035 standards by January 2020."

Why have you decided to train some of your team as Retrofit Coordinators?

"This has provided us with not only the experience of where we will be moving to, it has also given us the regulatory information that we will need to have in place to operate to standards. With our team trained in this qualification, it allows us to efficiently and effectively set up the process, with minimal down time."

Elinor Jenkins
Technical Director
at City Energy

What other PAS 2035 roles (Assessor, Designer etc.) do you expect to fulfil within your team?

"We will have a position for all aspects, we understand that the extensiveness of PAS 2035 will make it a barrier to companies that may be smaller, and we want to offer a comprehensive solution."

What impact do you expect PAS 2035 to have on your business and the wider industry?

"It will have the effect of slowing down delivery of measures through the ECO industry, however this can be negated with working with City Energy. Installers will be operating to the standards contained within PAS 2035, as they are best practice methods. It will be the evidence of these key stages and having the official accreditations in place that may be a timeframe hindrance. The industry standards will climb, as those who are not able or willing to work to these improved standards will exit the market."

