

Retrofit Coordinator: PAS 2035 FAQs



THE
RETROFIT
ACADEMY



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A MESSAGE FROM THE RETROFIT ACADEMY TEAM

Over the past 12 months, Retrofit Academy staff and tutors have been asked many questions about PAS 2035. We answer as many of these enquiries as we can, but we're often asked the *same question, many times*. To alleviate this and to help our audience understand PAS related issues better, we've pulled together our most Frequently Asked Questions in this document. We're always happy to help, and strive to provide you with clear answers as best we can so this document will be updated on an ongoing basis.

Our thanks to **Colin King, Matthew Williams, Peter Rickaby and David Pierpoint** for providing the answers.

1.



I have a project where the total number of properties is well above the level for risk path C, but the houses are spread over a 10-15 mile radius from the centre point.

The installer has been informed it should be risk path C but does not understand why.

If only 15 properties are being refurbished at a time on the same street, would this then make it risk path B?



The more properties a project contains, there is a higher risk of error and defects occurring.

This is because replicating mistakes at scale increases its impact on residents and property owners.

The PAS2035 Risk Assessment states that projects with:

- Fewer than 10 dwellings = Risk Path A
- 11 - 30 dwellings = Risk Path B
- More than 30 dwellings = Risk Path C

Retrofit Coordinators are reminded that it's the **highest assessed grade** across the five criteria that determines the overall risk path.

So whether or not your project is spread across a wide area or multiple streets, it's the overall number of properties that matters.



2.



Which Quality Assurance Schemes are considered suitable to reduce the Inherent Technical Risk?



At present, only SWIGA meet this criteria.

The Insulation Assurance Authority (IAA) is currently working on something too.

3.



Is air tightness testing required for all projects?



For Path C, where the retrofit design includes any EEMs for the improvement of the building fabric (e.g. insulation, air-tightness, replacement windows) and/or a ventilation upgrade (see Annex C), it shall also include an appropriate air tightness standard for the dwelling after the work has been completed. There is also a requirement for the Retrofit Installer to demonstrate compliance with the air tightness standard by means of an approved test (e.g. fan pressurization testing) in accordance with the standard published by the Air Tightness Testing and Measurement Association (ATTMA).

Path B is covered by PAS 9.2.5 and air tightness testing may not be required. Only assessment of the adequacy of the existing ventilation system and upgrade in accordance with Annex C is.

Path A is covered by PAS 9.1.12.

For all paths, Annex C 3.2 covers where the ventilation is to be upgraded. Testing may be needed when the ventilation is upgraded. Where intermittent extract ventilation or passive stack ventilation have been installed as part of the design, a test may be used to show that the air permeability is greater than 5 m³/m²h at 50pa.

4.



What guidance is available relating to ventilation?



The CoE have produced Technical Guidance on Ventilation, specifically IEV and DCMEV. This is available to members, and the calculators are included in the PAS Templates.



5.



If I am coordinating/assessing a considerable number of similar properties, do I need to carry out a retrofit assessment for each one?



PAS 2035 states “The Retrofit Coordinator shall ensure that **every dwelling** that is to be subjected to energy retrofit work is first assessed by a Retrofit Assessor, to provide information about the dwelling for use by a Retrofit Designer (see Clause 9).”

However, one assessment report may be used to cover a group of similar properties, provided that all dwelling-specific characteristics are identified.

6.



Does the Retrofit Coordinator and the company he/she is working for have to register with the TrustMark?



A Retrofit Coordinator has to register with one of the TrustMark-approved Retrofit Coordinator schemes. These are currently Elmhurst, Stroma and ECMK.

CIGA (also known as IAA) and Retrofit Works are also setting up schemes.

7.



What happens if we can't access a property due to COVID restrictions, and SAP and/or the Medium Term Improvement Plan can't be conducted?



Covid restrictions are not related to PAS 2035. It would be down to the funding scheme or client to determine what should happen.

8.



Who appoints and pays for a Retrofit Assessor's fees? Can the Retrofit Assessor be appointed by the installer directly?



The appointment and payment for a Retrofit Assessor is not applicable to PAS 2035, and it will presumably vary project to project.

Yes, many Assessors work directly for the Installer. However, as they don't have the power to specify solutions, there should be no conflict of interest. The Coordinator has to be the conscience of the project.



9.



What do you do when it's not possible to collect all the information you would ideally want in order to develop effective strategies (e.g. in tenement blocks or other shared properties where access is an issue)?



The quality of your assessment will be reflected in the quality of your retrofit, so it is important to make every effort to collect the necessary information.

Where that is not possible, make reasonable assumptions but include a big contingency (e.g. of time and money) for dealing with things that don't turn out as expected.

10.



On the PAS Templates Ventilation sheet, what is the difference between 'Incomplete' and 'Not Functional'?



As an example of an incomplete system, this could be where a home has extract fans, but no trickle ventilators; or if there is only a fan in the kitchen OR the bathroom, but not in both.

'Not Functional' would be where there are fans AND trickle vents present, but that one or more element isn't working. So, it might be that the fan has shorted out or the trickle ventilators have been somehow disabled or blocked up. That would mean there is a complete system in the home (with an intake and extract), but they're not working properly and may require like-for-like replacement or refurbishment.

11.



Do we need to lodge Energy Performance Certificates (EPCs) for each property, and who is responsible for lodging them?

If PHPP is being used as main energy modelling tool and assessment tool, do we also have to conduct RdSAP/ SAP modelling to lodge EPCs?



The Retrofit Assessor is responsible for lodging the Assessment Report. The Retrofit Coordinator is responsible for ensuring this has happened.

If an EPC is required for a property (e.g. as requested by the client), then yes, one needs to be lodged. However, an EPC is not a requirement of the PAS unless specifically requested by the client.

12.



What are the requirements for delivering design advice to the client under PAS 2035 and what handover documents are required to be given to the homeowner?



PAS 2035 requires the delivery of engagement advice and improvement option advice to be delivered by the Retrofit Assessor, with handover advice delivered by the Installer (all under the oversight of the Retrofit Coordinator). The advice should be provided to the dwelling occupants, regardless of tenure (i.e. the homeowner, the resident or a landlord). Where the property is rented, it's considered good practice to ensure information is also provided to the tenant, especially in a social housing setting; however, this is not covered in PAS 2035.

The full details of handover requirements are covered in section 12 of the standard (page 25). The documentation required for the Client is the Assessment Report. This is what's uploaded to TrustMark as evidence of compliance, so it should also be offered to the Client by copy.

13.



Who conducts the evaluation if the client does not appoint a Retrofit Evaluator?



In order to be PAS2035 compliant for monitoring and evaluation, all projects *must* have a Retrofit Evaluator appointed. This includes both the pre-assessment and post- airtightness test.



14.



If the role of a Retrofit Coordinator is primarily to protect the client's interest and ensure they receive a good service, is there not a 'conflicte of interest' if that Retrofit Coordinator is employed directly by the Retrofit Installer?



PAS 2035 states the role of the Retrofit Coordinator shall be to protect *both* the client's *and* the public's interest. Therefore, a Retrofit Coordinator may be employed directly by the Client, or by an organisation commissioned to undertake assessment, design, installation, commissioning or monitoring. Where a conflict of interest arises between the Coordinator's duty to protect the client's interest, the public's interest and his/her employer's interests, it shall be declared to the Client so that arrangements can be made to resolve it.

15.



Can several different designers be involved in one project (e.g. a system designer for one system, plus a Retrofit Designer and Coordinator working on other elements)?



Yes, several designers may work together; however, one must be the Lead Designer who is able to sign off the whole design solution.

16.



Can large-scale projects involving hundreds of projects be broken down to form lots of smaller projects (less than 30 dwellings) in order to try and ensure projects remain Path B?



If the project falls naturally into small groupings of dwellings, (e.g. blocks or streets), then yes. Otherwise, no.

17.



What should a Retrofit Coordinator do if a Retrofit Designer's proposed solution does not fully mitigate the risks of thermal bridging? What happens if the Retrofit Coordinator does not believe that any design solution can eliminate all the risk?



It is the Retrofit Coordinator's responsibility to ensure the design is compliant.

Retrofit Coordinators are responsible for managing risks as effectively as they can be managed. They should use their judgment to evaluate whether proceeding with a design will achieve the intended outcomes or leave an unacceptable level of risk. Should that risk outweigh the benefits of proceeding, the Retrofit Coordinator should advise the client that the project should not proceed.

It is not possible to completely eliminate risks. They should be mitigated as far as possible, then managed.

18.



If a Retrofit Coordinator and Designer advise the client to insulate a certain part of the building (e.g. a staggered party wall or below DPC) but the client chooses not to, can the project still be signed off by the Retrofit Coordinator as conforming to PAS 2035?



No, it cannot. This may result in withdrawal of funding (e.g. from ECO), under which non-compliance is not negotiable.

19.



Would internet connection be considered a building service and therefore part of what a Whole House Assessment should evaluate and test?



It would only be considered a building service if the Internet connection is considered critical to the energy performance of the building, (e.g. via Google Nest).



20.



What is a Significance Assessment and where can I find it?



The Significance Assessment is defined in BS 7913. There is a simplified version (applicable in Path B only) on the BSI website, which can be downloaded for free.

21.



Are all solid wall properties considered “traditional”?



This is a difficult subject, and the full answer is under review.

The short answer is yes. However, it's more appropriate to use an elemental approach based on the actual characteristics of the various walls. The key point is that just because a dwelling has solid walls, the construction might not necessarily be vapour balanced, but could still be in moisture balance.

The key is not to unbalance it, but it may be possible to move the balance either way (i.e. towards or away from 'vapour open').

22.



Are Retrofit Coordinators required to obtain full scale drawings under full SAP?



Full scale drawings are not a requirement of PAS 2035; however, they can be very useful to the Retrofit Designer and for project costing.

23.



In the GHG, park homes are classed as high risk projects that must be delivered to PAS 2035. However, they are not referenced in the Construction and Built Form criteria in PAS 2035 Table B1.

To which risk grade would they be assessed?



TrustMark has agreed that park homes are to be assessed as system-built, which would result in risk grade B under criterion 5.

For park homes, insulation of the floor, walls and roof is treated as a single measure (so all elements must be treated), and has inherent technical risk 3 in Table B2, which results in risk grade B under criterion 3.

24.



'Below DPC Insulation' thermal resistance of the build up should be at least 0.75 of that achieved through the main wall. Following this, the thickness of insulation below DPC would need to be MIN 100mm (as insulation types used below DPC cannot offer as good a thermal conductivity value of the phenolic insulation which is 0.22mm). This detail would result in a step out / ledge at DPC level.

Is there a best practice detail for 'Below DPC Insulation' when the main system is phenolic (with a thickness between 60-80mm)?



There is currently no best practice detail available for EWI when the main elements of the property are to be insulated with phenolic insulation.

Since the material placed below DPC is different, which is down to a requirement for more robust water resistant materials to be used, the consequence is a reduced thermal performance compared to phenolic. This then results in the step detail in question.



25.



Do the requirements for fire doors override the PAS 2035 ventilation requirements for door undercuts?

What guidance is there on the use of intumescent strips in this situation?



Yes, a requirement for a fire door would override the door undercuts requirement in PAS 2035 Annex C.

However, the ventilation could be constructed with air inlet and extraction in each fire zone (e.g. SRHRRVs) in order to meet both requirements.

26.



Is there a postcode search available for exposure zone?



Some SAP software does this. 'BR 262 Thermal Insulation: Avoiding Risk' includes a map, but it is small scale.





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