

# Best Practice Retrofit Assessments

### Supply chain advice pack

June 2025

Funded by:

Department for Energy Security & Net Zero

www.riseretrofit.org.uk

# Introduction to retrofit assessments

PAS 2035 is a UK standard that provides a framework for retrofitting buildings to improve energy efficiency. Introduced in 2019, it ensures a whole-building approach, considering factors like insulation, ventilation, and heating systems. As one of the most crucial steps in the process, PAS2035 requires every dwelling within a project to have a "whole dwelling assessment" completed, this is otherwise known as a retrofit assessment. The general process for completion of retrofit assessments is as follows:



The retrofit assessment should be undertaken by a qualified retrofit assessor. It is a comprehensive evaluation of a buildings current condition, energy performance, occupancy levels and feeds into understanding its potential for improvement.

### Sections of a retrofit assessment

- **Condition report:** this is an assessment of the building fabric, looking at its condition and highlighting any areas requiring remediation prior to works, such as structural issues.
- Ventilation assessment: this highlights any currently installed ventilation systems such as extract fans and trickle vents and is essential for determining required ventilation upgrades
- Occupancy assessment: this is used to assess how the building is being used by the occupants and considers number of occupants, fuel bills, and vulnerable individuals.
- **Energy assessment:** this section uses the RdSAP methodology to determine the current energy performance of the dwelling and highlights areas for energy efficiency improvement.
- **Significance assessment:** this is used to assess any significant heritage features of the dwelling, informing the designer of applicable energy efficiency measures. This assessment is required if the dwelling is determined to be of traditional construction e.g. solid brick.

# **Training and qualifications**

To ensure high quality and reliable information is collected, projects being completed under PAS2035 must have a retrofit assessment completed prior to the design of improvement measures. Some key qualifications required to undertake these assessments are outlined below:

- 1. Domestic energy assessor (DEA) This is a mandatory qualification that allows an individual to produce EPCs using RdSAP.
- 2. Level 3 retrofit assessor (RA) The mandatory qualification required to undertake the occupancy, ventilation and condition reports.
- 3. Level 3 Energy efficiency for older and traditional buildings This is required for an assessor to survey traditional dwellings (Pre 1919), however is not required if newer dwellings are to be surveyed.

### Standards and regulations

- BS40104\* is the new British standard for retrofit assessments, due to be introduced July 4<sup>th</sup> 2025 it is intended to supersede PAS2035 specification for retrofit assessments – however this has not yet been confirmed.
- 2. BS 7913:2013 is a UK standard guiding the conservation of historic buildings. It promotes best practices, emphasising significance, sustainability and minimal intervention to preserve heritage while ensuring responsible maintenance and management.

\*This note was accurate at the time of publishing in June 2025, you should always check for updates.

## **Assessment tools**

A retrofit assessment can incorporate a number of tools which help assessors and coordinators gain a better understanding of the dwellings being assessed.

### Some essential tools used for retrofit assessments are:

- Tape measure
- Laser distance measure
- Camera
- Ladder

### Some additional tools may include:

- Door undercut measuring tool
- Glazing gap gauge
- Anemometers
- Thermography camera
- Borescope camera
- 3D imaging cameras e.g. Matterport

### Assessment techniques

A retrofit assessor should also ensure robust data filing system allowing for the easy retrieval of information for audit purposes – this should include:

- A consistent file naming convention.
- Back up storage on a drive or cloud.
- Supporting information such as planning documents or FENSA certificates.
- Photos must be time and date stamped.

#### Top tips for retrofit assessors

- Shadow a more experienced assessor for your first few assessments.
- Use a printed site notes sheet/checklist to avoid forgetting data.
- Take more photos than you think are needed as returning to site for a photo can be time consuming.
- Limit the number of surveys per day (two to three) to allow for higher quality assessments and outputs.

----

# **Case studies**

### Good retrofit assessment



#### Source: Baily Garner



#### Source: Baily Garner

### A good retrofit assessment includes:

- Measured background ventilators
- Measured door undercuts
- Plenty of photos

-

0

1

- Clear legible floorplan and site notes
- An accurate RdSAP assessment attached



Source: Baily Garner



### A poor retrofit assessment Includes:

- Unclear photos
- Missing information
- Limited photos

-

0

1

• An unclear floorplan and site notes

Source: Baily Garner

### Why is the retrofit assessment important?

A good quality retrofit assessment is essential to reduce the chances of any negative outcomes from the retrofit process. A poor retrofit assessments may impact the following:

#### Residents

- More disruption if further surveys are required.
- Stress or anxiety caused by a longer process.
- Higher fuel bills from poorly designed measures.

### Design

- Design change costs from unforeseen issues.
- Longer design stage due to lack of information.
- Incorrect data may lead to non-applicable measures being designed.

### Installation

- Higher installation costs if issues are discovered when on site.
- Longer installation time.

#### **Energy performance**

• Inability to reach targets (E.g. EPC C) if data from survey is incorrect.

1

• Non-applicable measures may lead to a performance gap.

<u>www.riseretrofit.org.uk</u>

In. RISE – Retrofit information, support & expertise