

HOW IS THE ENERGY RATING CREATED?

The core methodology underpinning all residential assessments is that any improvement measure can only be included if supported by **visual or official documentary verification**.

Otherwise, all the thermal characteristics of the dwelling will be assumed to be unchanged from the date of original construction.

Each assessment comprises three elements:

1. DATA COLLECTION

- Visiting and surveying the property to collect a comprehensive dataset specific to the dwelling. This includes the composition of the external structure, heating method/s, fuel consumption (excluding domestic appliances) and insulation levels.
- The survey is non-invasive. Data is collected by the assessor in adherence to rigid national conventions and administered by Government approved Accreditation schemes.
- Typically, around 100 individual items are recorded, ranging from the age of the property to which rooms have low energy light fittings.
- **A survey will normally take about an hour for an average sized property.**

HOW DOCUMENTARY RECORDS CAN IMPROVE DATA ACCURACY

Often-problematic areas of identification that have the greatest impact on the rating are:

- The age of the original dwelling.
- The construction date of any later extensions, including loft conversions.
- Insulation concealed in flat roofs, eaves areas & ceilings of roof rooms.
- Identification of the exact make and model of gas boiler.
- Evidence of retro-installed cavity wall insulation (if installed).

Typical documentary evidence * to ensure that the correct thermal properties are applied to the calculations can include:

- ✓ Title deeds, NHBC certificate, old local mapping.
- ✓ Planning applications/Building control completion certificates. **
- ✓ FENSA window certificates (Usually, but not always issued for double-glazing installed after 2002). **
- ✓ Cavity wall insulation guarantees (especially important if the exterior walls are rendered and fill holes have been painted over).

- ✓ Invoice receipts for building works.
- ✓ MCS (Microgeneration Certification Scheme) certificates.
- ✓ “Before and after,” or “Work-in-progress” photographs of extension projects. (These can sometimes prove very effective at evidencing insulation not visible post-completion).
- ✓ Where there is no mains gas supply, a utility bill showing an off-peak electricity tariff (if applicable).

* All documentation should ideally show the subject property address, date issued, and nature of work carried out.

** The assessor will also try to obtain any supporting documentation online prior to the survey, but ultimately, if there is no documentation to hand, an EPC can still be produced using default assumed values, but this will compromise the accuracy of the rating.

2. PROCESSING THE INFORMATION

- The data is input into a dedicated computer program to produce a snapshot of how cost efficient the dwelling will be at maintaining a standardised interior temperature model all year round.
- One single calculation program - **RdSAP** (Reduced Data Standard Assessment Procedure), designed by the Building Research Establishment is used throughout the country to provide a level playing field when comparing one property to another. The software is regularly updated to maximize accuracy and keep up with technological advances and new product launches.
- A cost efficiency rating can then be calculated from the combination of visual observations and/or from any reliable documentary information that may exist. If neither method is conclusive, the software will make assumptions for heat retention properties of the building fabric based on the likely standard at the time of original build. This can be particularly disadvantageous for older properties built before thermal performance was given as much importance as today.

3. ENSURING THE ASSESSMENT MEETS THE SPECIFIED STANDARD

To maintain quality and accuracy of assessments, an accreditation body will regularly audit site notes of randomly selected properties, requiring the assessor to submit photographic evidence of site observations and documentation relating to the energy characteristics of the building.