



Domestic EPCs are Changing (RdSAP 10)

Hopefully, all domestic energy assessors will by now be aware that the government are embarking upon a programme of change for domestic energy assessments in England (the other administrations are also developing their own similar plans).

These changes are intended to:

1. Improve the accuracy and reliability of EPC assessments and associated recommendations;
2. Improve the quality of collected evidence and, in turn, of the assessments being completed;
3. Account for developments in best practice and the technologies available;
4. Promote further improvements to the energy efficiency of homes in the future;
5. Reduce the carbon footprint of homes in the future; and
6. Allow the use of EPCs for a wider range of purposes including ensuring that they better support government initiatives and objectives.

To achieve this, there are a number of initiatives underway, and changes planned that will affect all energy assessors, particularly those working in the domestic sector. The ultimate objective is the introduction of the new Future Homes Standard and accompanying Home Energy Model (HEM) due next year. This project is developing well and at pace with the first public consultation now completed. In the meantime, the long delayed introduction of RdSAP 10 is now expected this summer (date still to be confirmed).

We are aware that some accreditation schemes and training organisations have already been providing updates for the introduction of RdSAP 10. However, we have made a conscious decision not to embark on this prior to this update as many details were yet to be confirmed. It has been our intent to avoid contradictory advice by waiting until we are at a point where we can release confirmed details for assessors to implement.

Take action now!

Whilst some aspects of RdSAP 10 are still in development (including the actual assessment software), we are now at a point where many of the details have been confirmed. We also believe that we are now at a point where all Domestic Energy Assessors (DEAs) need to take action to ensure that they are ready for the changes ahead.

What is changing in RdSAP 10?

RdSAP 10 includes numerous changes, many of which will occur behind the scenes in the calculation engine. However, there are some major changes that will require the collection of additional evidence beyond that which is routinely collected at the moment. These are complemented by a number of other significant changes that will impact the way an assessment is calculated, and the ratings produced. The current engine of RdSAP 10 awaiting implementation is RdSAP 10.2.



Major changes requiring the collection of new data:

- Window measurements required for all windows.
- Location of each window allocated to main walls or each extension, or alternative walls.
- Window shutters added as a new feature.
- Room in roof (RR) revised to take into the account all elements including continuous main wall. This includes new measuring requirements.
- PV Diverter for water heating added.
- PV Batteries added.
- An accredited air pressure test (Air Tightness Testing) result can be used if available.
- Small scale hydro added as in SAP10.2.

Significant changes compared to RdSAP2012 specification include:

- Thermal properties of insulation revised.
- Roof insulation details have more options.
- Floor insulation revised; heated basement details added.
- Table of Window U-Values expanded.
- U-values of brick wall revised to account for wall thickness.
- U-values of stone walls revised.
- Curtain wall added as a new wall type.
- Hot water tank size included.
- Hot water tank insulation included.
- Additional alternative/sheltered wall added.
- Mechanical ventilation is treated as in full SAP allowing PCDB entry, still allowing default values.
- PV calculated as in SAP10.2.
- Ventilation algorithm allows more options.
- New age-band M added, and all tables of U-values updated.
- Data for Isle of Man added for completeness of information.
- Table 32 with the RdSAP10-specific fuel prices replaces fuel prices in Table 12 of SAP10.2.
- RdSAP10-specific metrics added to replace SAP metrics in SAP10.2.
- Flue gas heat recovery - calculation according to SAP 10.2.
- Waste water heat recovery - calculation according to SAP 10.2.
- Heat pumps - Calculation according to SAP 10.2.

Additionally, there are a number of changes to the recommendations produced and the factors that trigger them. These include:

- Improved U-values revised for all building elements.
- Measure to insulate party wall removed.
- Order of measures for Northern Ireland removed.
- Air and ground source heat pumps are no longer alternative measures.
- PV battery and PV diverters added.

What are the RdSAP 10 Data requirements?

A full list of all the data inputs required to complete an assessment using RdSAP 10 is provided in Table 31 of the RdSAP 10 Specification. This table also provides some clarification as to the meaning of some terms.



Much of the data collection remains the same as the current assessment process. However, there are some very significant changes and assessors are advised that they should expect site surveys to take significantly longer than the current assessment methodology.

Significant changes include:

- **Windows:** Full details of all windows (including roof windows) must be recorded. For each, this includes the dimension of the opening (measured to 0.01m or better), type of frame, type of glazing, glazing gap, window age, the window orientation, whether or not it has fixed shutters, type of shutter, whether the window is draught proofed and the building part that it is within. If specific specifications are available (e.g. u-values, g-values etc) these must also be evidenced on a window by window basis. This may be achieved using either a window schedule or by recording the relevant information on a detailed floor plan. NB: Windows within a non-separated conservatory must be measured but those in a separated conservatory may be ignored.
- **Roof Rooms:** Roof rooms are now treated differently depending upon the type and construction elements present. Construction elements include any common wall within the roof room, gable walls, party walls, sheltered walls, common walls, sloping ceilings and flat ceilings. For the purposes of site data collection, the following details will need to be recorded for each construction element separately:
 - The construction type / method;
 - Any insulation present that can be evidenced;
 - The length and height of the element (measured to 0.01m or better) to enable the area to be calculated.

Additionally, the floor area of the room will also still need to be recorded.

- **Environmental Technologies:** Where environmental technologies are present (e.g. PV diverters, PV batteries, hydro generators etc.) their presence should be recorded and evidenced including serial and product numbers where possible. Specifications for the systems should also be collected where possible.
- **Air Tightness:** Where testing has been undertaken, details and a copy of the accredited result should be obtained.
- **Building Orientation:** The building orientation, context and location is now of great significance and will need to be evidenced as part of every assessment. We expect that a suitable aerial photograph (e.g. from Google Earth) be supplied for each assessment which clearly identifies the building being assessed and its orientation. Non-domestic assessors will already be familiar with this requirement.
- **Smart Meters:** Recording the presence of smart meters and the fuels they serve.

Why do I need to take action now?

It is not expected that there will be an overlap of methodologies. A date will be set from which all lodgements will need to use the RdSAP 10 methodology and lodgements using the current system are not expected to then be possible. Whilst there will be advance warning of this date, we have observed that the notice period is likely to be less than the typical period between site survey and lodgement currently used by a significant number of assessors lodging with us. Furthermore, should any lodged assessments fail audit and require replacement, this may have to be completed using the new methodology and so will require the additional data inputs to be available.



To be clear, failure to ensure that all the evidence and data required for an RdSAP 10 assessment is collected now may result in it becoming necessary for you to revisit the site again in the near future.

All assessors are also reminded that it is best practice to ensure that all assessments are lodged as soon as possible following a site visit, typically within 48 hours for a domestic EPC using the RdSAP methodology.

Are audits also changing?

For some time now, the quality assurance regime for energy assessments has been moving away from set percentages and towards a risk based approach. This has seen greater targeting of audits towards common errors. This approach is expected to continue with the new methodology.

The minimum standards for quality assurance are set out by EASOB in the Level 2 Scheme Operating Requirements (SORs). Additionally, all accreditation schemes are regularly (typically every six months) audited by external auditors on behalf of DLUH to ensure that they are implementing these and meeting the governments expectations. In the context of increasing public scrutiny of energy assessments and growing reliance upon the results by public and private bodies alike, there is an increasing demand to ensure that the quality, accuracy and reliability of all assessments is as high as possible.

What is the impact of this? Put simply, audits are becoming more detailed, auditors have less discretion over the significance of administrative errors and missing evidence. Greater effort is having to be put into specifically finding erroneous certificates and reports to ensure that they are corrected. Assessors are expected to support this process and, should an assessor fail an audit due to a specific error, they should review and correct any other assessments they have completed where the same or a similar error may be present.

So what are the overriding expectations regarding the quality assurance process?

1. All assessments should be accurate and supported by sufficient high quality evidence to confirm every data entry made. Publicly available information should be used to validate and expand upon evidence collected through site surveys.
2. No assessment should remain on the National Register if it is believed that item 1 above has not been achieved. All such assessments should either have their accuracy confirmed through the provision of additional evidence or be marked "Not for issue".
3. Any assessment marked "Not for issue" under item 2 above should be replaced promptly wherever possible.
4. Assessors should be provided with meaningful feedback that identifies opportunities for developing their practice and understanding further in addition to identifying all errors found within the assessment process (whether or not they have any impact upon the outcome).

As a result, it is more important than ever that audit submissions are complete and submitted in a timely manner. We provide proformas and submission checklists to support this but assessors must remain conscious that these provide minimum suggested evidence requirements and that they are responsible for supplying sufficient evidence to support all aspects (data entries) within their assessment.



Recently, a gap in the current Level 2 SORs has been found where an assessment which is not supported by sufficient evidence may remain on the register as it has not been proven to be defective. Accreditation Schemes have been instructed to close this gap by ensuring that sufficient evidence is obtained to enable the audit to be fully completed. An assessor may be required to return to site to achieve this and may be suspended from lodging whilst this is achieved.

The potential failure criteria for quality assurance audits remain as:

1. **Failure to submit evidence:** A submission of the required evidence was not made by the established deadline.
2. **Insufficient evidence:** The evidence submission made does not contain sufficient reliable evidence to support all aspects of the assessment and prove a rigorous site visit was completed as required. Common reasons for failure are:
 - Undated photographs;
 - Photographs edited or not supplied in a suitable original image format e.g. JPEG. *(Photographs should not be supplied as PDF files [effectively a printed document] or in HEIF / HEIC format [a specialist format used by some Apple products]. NB: Apple products allow conversion of HEIF / HEIC files to JPEG for sharing and can also be set to use more standard formats);*
 - Too few photographs;
 - Photographs lacking context and / or relevant detail;
 - Poor quality floor plans lacking key details;
 - Insufficient site notes;
 - Missing documentary evidence that has been declared or is required.
3. **Failure to follow Conventions:** Whilst most instances of failure to correctly apply the current Conventions are currently assessed through other criteria, a failure to follow the current Conventions is sufficient on its own to result in an audit failure. Common reasons for failure are:
 - Failure to measure to 0.01m or better (Convention 2.02);
 - Failure to state whether measurements are recorded internally or externally (Convention 2.01);
 - Failure to measure wall thicknesses (Convention 2.22);
 - Failure to specifically explain why a loft has not been accessed (Convention 3.04).
4. **Descriptive Errors:** This covers any change to the descriptive text shown on the assessment certificate. Common reasons for failure are:
 - Failure to use the correct assessment date;
 - Failure to include relevant addenda;
 - Misidentification of houses as bungalows;
 - Selection of incorrect construction types.
5. **Recommendation Errors:** This covers any change to the recommendations included on the certificate. Common reasons for failure are:
 - Use of “Unknown” to describe insulation inappropriately;
 - Description of terrain as “Rural” inappropriately;
 - Failure to record loft access as being present;
6. **Assessment Variance:** This covers any assessment where the total impact of all errors made on the SAP score exceed the established limit (even if they cancel each other out).
7. **Serious Professional Failings:** This covers a host of other matters, largely relating to professional conduct and competence.



What about training & CPD?

In line with the drive to improve the quality of all assessments, the requirements for training and CPD are also being tightened. Whilst the headline concepts remain the same, some additional clarity has recently been issued by EASOB and PEPA.

First, at least 50% of the annual CPD requirement must be made up of certified training (many accreditation schemes have already required this). To be considered certified training, the training must be structured and provided to you by a third party. It must cover material directly relevant to the assessments you are qualified to undertake, should include assessment of the learning achieved and you must be provided with a certificate to confirm the completion of the course material and hours of CPD undertaken.

Furthermore, where assessors are identified through the quality assurance audit system as having gaps in their knowledge and/or practice (typically by repeated similar errors), they may be required to complete specific corrective training. This cannot be counted towards any CPD requirement. Similarly, where an assessor is found to have serious gaps in their knowledge and/or practice (typically by repeated failure to supply sufficient audit evidence or through submissions containing large number of errors and/or fundamental mistakes) they can be required to repeat their qualification training.

Will there be further support?

As an Accreditation Scheme, we are committed to supporting our assessors wherever we can. We intend to issue further support and guidance as confirmed information becomes available. Assessors should continue to monitor emails and the scheme website for these publications.

Property Tectonics are also developing the Lifespan RdSAP interface to meet the new requirements. They will be making information available to users in due course to support these changes.