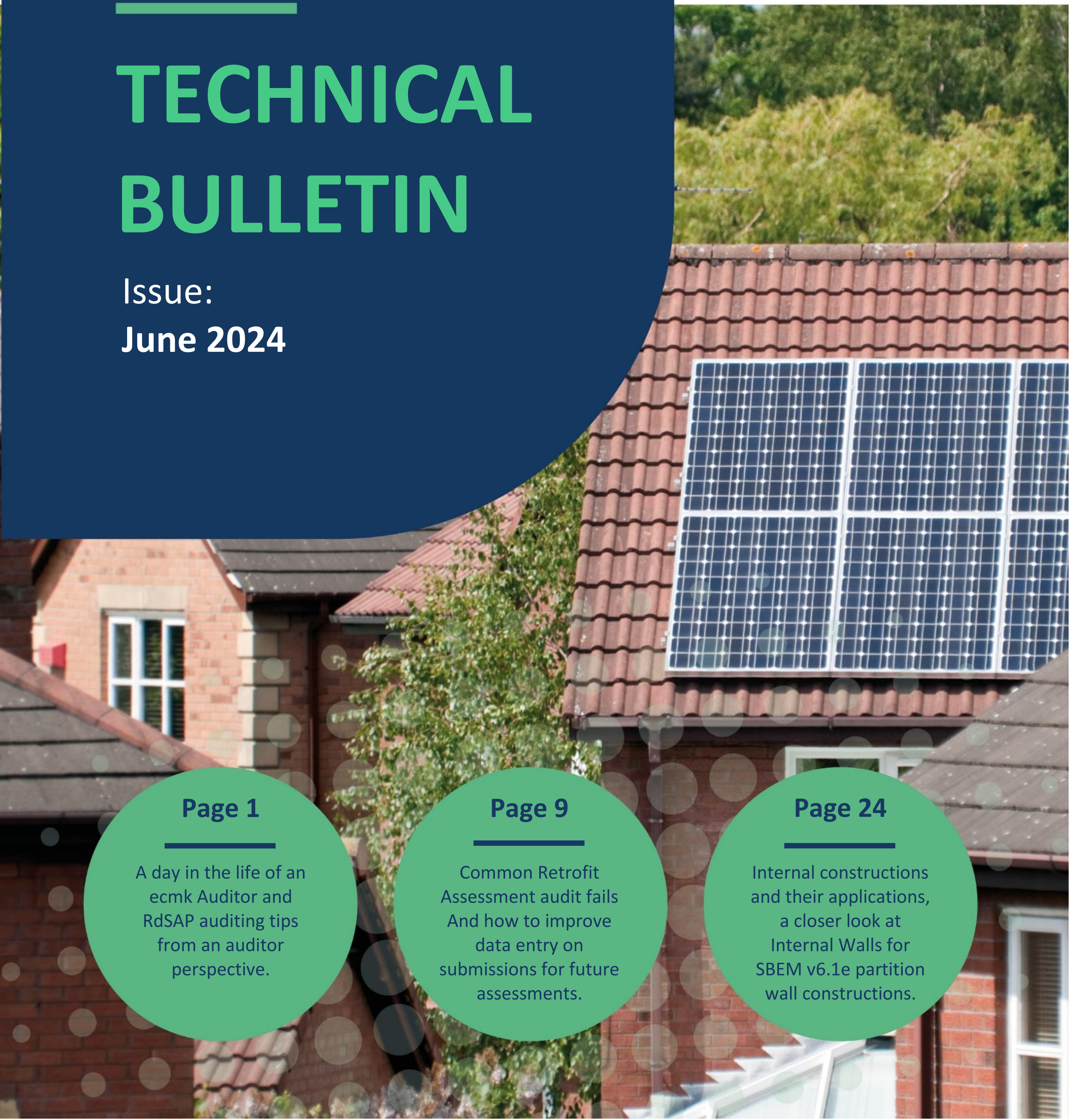
TECHNICAL BULLETIN

Issue:

June 2024



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A day in the life of an ecmk Auditor and RdSAP auditing tips from an auditor perspective.

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Common Retrofit Assessment audit fails And how to improve data entry on submissions for future assessments.

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Internal constructions and their applications, a closer look at Internal Walls for SBEM v6.1e partition wall constructions.

Welcome

Hello and welcome to the June issue of the ecmk Technical Bulletin. In this issue we cover a day in the life of an ecmk Auditor with some useful insights into why we audit and how to be audit ready. We discuss Radbots and correct data entry for RdSAP. We also take a detailed look into common audit fails for Retrofit Assessors and Retrofit Coordinators. For Non-Domestic we further explain internal constructions and their applications and look at EPC conventions issue 9.

Ian Rowley, Scheme Manager, ecmk

Inside this issue:

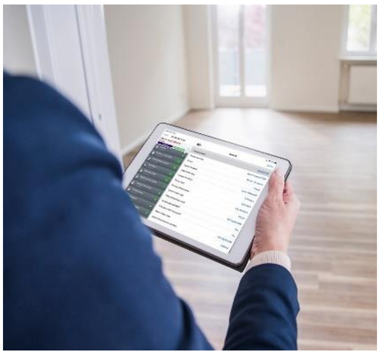
Upcoming training & CPD

A day in the life of an ecmk Auditor

RdSAP - Auditing tips from an auditor perspective

Having recently joined ECMK's Auditing Team, I'd like to share with you *"A Day in the Life of an Auditor"* which I hope you'll find both inspiring and beneficial.

I became qualified as a DEA back in 2007 and am still actively involved in carrying out assessments. Whether you are new in the field or long in the tooth like me, I hope to provide some handy tips to help smash those audits! Sitting on the Auditor's side of the fence, I see things very differently and I need to try and get that message across to you.



Try and put yourselves in our shoes, we're not with you jumping up and down on a floor to hear whether it's solid or timber, so it's your job to show us! Take a photo of the air bricks which say it's a suspended floor … **it's that easy!**

The essence of an audit is to replicate the assessment and verify the data entry by means of the photographs you have taken. It's also a constructive experience, giving you the opportunity to learn and develop your skills as well as showcasing your expertise and professionalism.

So why do we audit?

Under the Government's Scheme Operating Requirements (SORs), all accreditation Schemes throughout the UK are required to audit their Members. This ensures that everyone is up to speed with industry requirements and are crucial for the integrity of the EPC. It's not just about ticking boxes, it's about providing information for homeowners and businesses to make smarter energy decisions.

You may also be interested to know why an audit fails and why some fails require a re-issue and others don't. Firstly, you should note that there is an allowable 5 point SAP tolerance, which can be minus or plus, so anything more than 5 points would result in an automatic audit fail.

So let's look at the trigger points for a failed audit whereby the EPC is requested to be re-issued:

- **A descriptive error on the EPC.** This could be something as simple as the wrong detachment type, for example a semi-detached house when it's detached or a bungalow with an upper floor which should be described as a house.
- **Suppression or Incorrect Recommendation** as a result of incorrect data entry.
- **Forgetting to tick an Addendum**. For example, the Addendum to tick for the presence of PV panels generates an explanation on the EPC that any feed-in tariffs have not been accounted for when calculating the heating cost assumptions.

In England, Wales & Northern Ireland you can also fail an audit if we are unable to verify the data entry due to lack of evidence, or no evidence submission at all. In this instance, you would not be required to re-issue the EPC as who's to say, who's right and who's wrong, the Assessor or the Auditor!

So let's now ask the question, what is the purpose of a photograph? We all know the definition of a photograph is to capture an image of an object, person or scene in the form of a print or slide recorded by a camera.

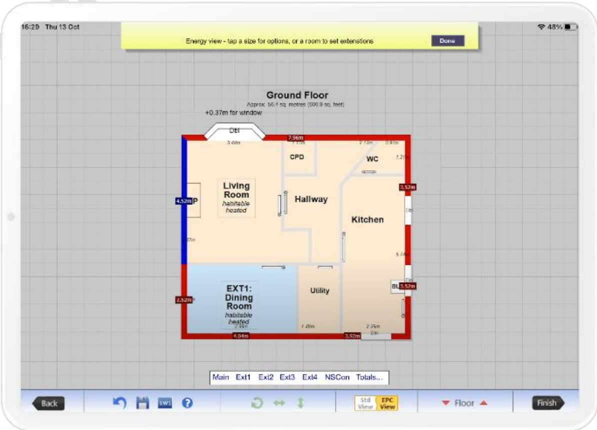
But for RdSAP it's much more than that, it's a vital piece of evidence that may need to be relied upon should a subsequent complaint be forthcoming with regards to the accuracy of the EPC, which, as you know, currently has a life span of ten years. It's also the difference of an accurate EPC and a defective EPC …. and most importantly for you, it's the difference between an audit pass or an audit fail.

So having established how important your photos are, lets delve into what makes a good photograph. Remember, your photo is your eyes, it's purpose is to show us what you're seeing. Therefore, it must be in focus, it must have the right amount of light and it must be directed solely at the subject object. So don't rush around taking inadequate photos which are blurry or unclear, irrelevant and too high a resolution. Ask yourself, does this photo show what I need it to show?

Did you know that when you take a photograph of an electric meter, you're not taking it to show us that a meter is present … you're taking it to show us the meters' tariff. So push the button to take the meter through it's cycle and photograph whether there is one rate or two rates.

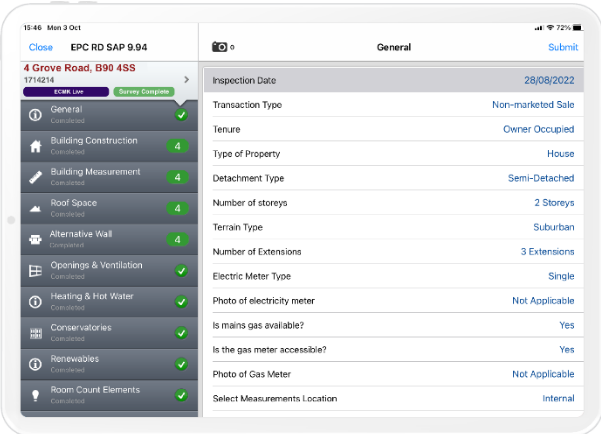
A date and location stamp is also a mandatory requirement of the photo, it tells us when and where the picture was taken. And finally, but by no means any less important than the photo itself is to label each image when submitting for audit … tell us what we're looking at, it may be obvious to you but to an Auditor it can lead to a question mark!

Surprisingly I've come across many assessments over the last few months which have been carried out in the dark! Surely not, I hear you say, as it's sometimes difficult in daylight to find what we are looking for let alone trying to do this in the dark. You might just as well not take any photos as they are all a complete waste of time! This would also result in a failed audit.



Another good audit tip is to submit a good floor plan. It needs to be clear, concise and easy to understand. Always include a “key” so that we can navigate around the plan. Use different colour pens to differentiate between a heat loss perimeter and a party wall. Your plan should clearly define any extensions and it should mirror your exterior elevation photographs. A good industry App for perfect floor plans is PlanUp which is certainly worth consideration.

And finally, I would encourage all Members to use the Smart Survey App. It’s a brilliant App which takes you through the data collection in a systematic and orderly manner. It prompts you to take a photograph of all the required elements which make up an EPCs data entry and it’s a big plus when it comes to providing your evidence for audit. It also integrates seamlessly with the PlanUp software enabling a rapid and accurate generation of onsite floor plans.



Ask for support

Some Members have misconceptions. For example, they believe that to ask for support would trigger a higher audit percentage. This is not true, there are no repercussions for asking for support and our team are always happy to help. So, if you come across something you are unsure about, don’t be afraid to ask as it will ultimately make you a better Assessor.

Another occurrence which I regularly come across is “enquiries of owner” to establish, for example, the build date of the property or the double glazing age. Remember a homeowner will only tell you what they believe you need to know, they’re wanting to achieve as high a rating as possible to make their property stand out from the crowd. So be sure to gather your own additional evidence as a homeowner’s word is only “hearsay” and is not sufficient evidence to base your decision upon.

The internet is available to us all, so use it …. as Auditors we do! For example, we use Google Earth Pro to track historic images of the property to confirm the build dates in respect of extensions or rooms in the roof which have been added during the property’s lifespan.

We also use Rightmove to view the property from an Estate Agents perspective (if available). Many a time I have come across a photograph on Rightmove which tells a very different story … a photo of the main living room is the biggest give away as there, in all its glory, for all to see, is a gas fire! But was it included in the assessment as a secondary heater? …. unfortunately, not. This omission would result in an audit fail so don't get caught out.

If we see a chimney, we expect your evidence to show us the presence of some form of secondary heating. However, if the chimney has been blocked off, removed, or used as a decorative focal point only, then SHOW US!!

However, in showing us, this may raise a further question mark. What does this picture of the fireplace say to you? …. It says, am I open or am I closed? So, pre-empt the question and answer it by positioning your camera so we can also see up the chimney!

Remember, it's your responsibility to be audit ready ….

- Take clear, well lit, in focus date and location stamped photography
- Label each photograph so we know what you are showing us
- Never conduct an assessment in the dark
- Produce clear, concise and easy to understand floor plans denoting heat loss perimeters, party walls and extensions
- And finally, use the technology at your fingertips in the form of Smart Survey App, PlanUp and the internet as a whole

Take pride in what you do and combine these tips to help you become a better Assessor …. and conquer those Audits!

Radbots

Correct data entry for RdSAP

Radbots have been increasingly more popular in domestic homes since being approved by OFGEM for ECO.

Radbot is essentially a smart thermostatic radiator valve that incorporates environmental sensors and embedded AI algorithm intelligence in order to predict room occupancy and automatically regulate radiators. This aims to provide radiator by radiator zoning, allowing temperatures in unoccupied spaces to be reduced and thus reducing fuel bills and saving energy.

Heating Controls Search

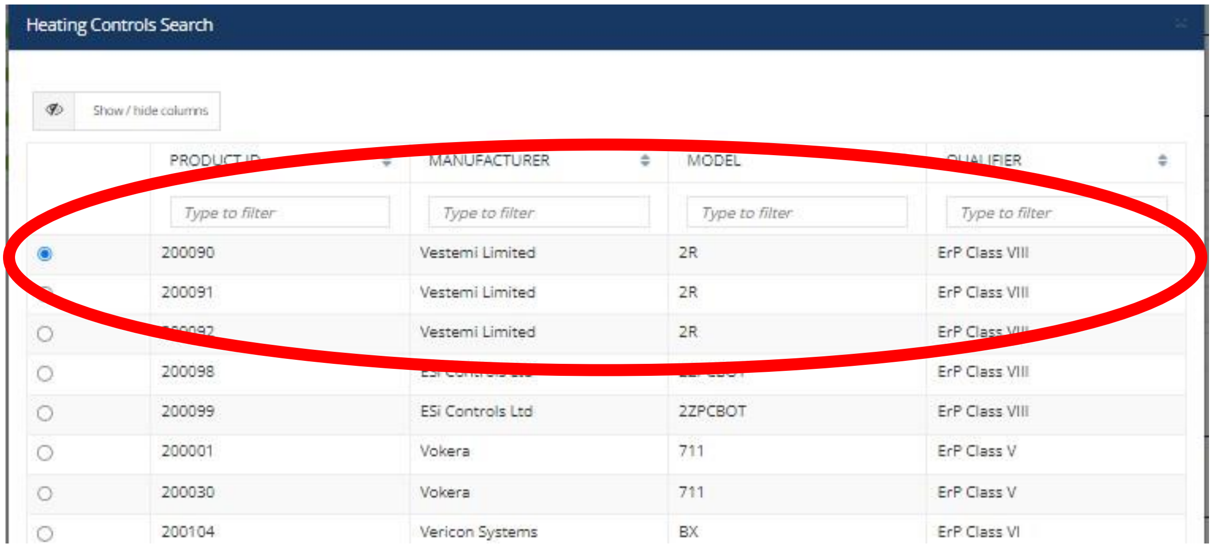
Show / hide columns

	PRODUCT ID	MANUFACTURER	MODEL	QUALIFIER
	Type to filter	Type to filter	Type to filter	Type to filter
○	200090	Vestemi Limited	2R	ErP Class VIII
○	200091	Vestemi Limited	2R	ErP Class VIII
○	200092	Vestemi Limited	2R	ErP Class VIII
○	200098	ESi Controls Ltd	2ZPCBOT	[illegible]
○	200099	ESi Controls Ltd	2ZPCBOT	ErP Class VIII
○	200001	Vokera	711	ErP Class V

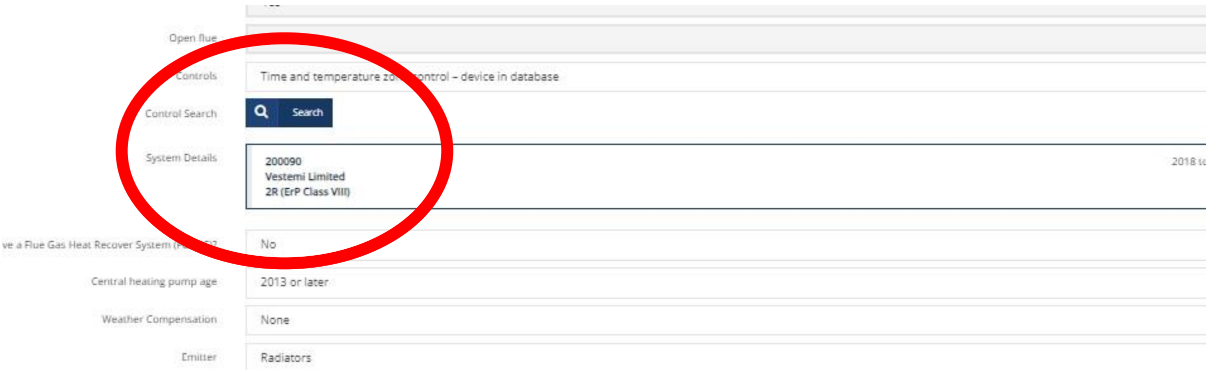
For the purpose of RdSAP, Radbots are smart TRVs (as long as convention 4.13 TRVs has been met) and classed as time and temperature zone controls for RdSAP data entry.

There are 2 generations of Radbot on the PCDF:

- **Radbot 1**
- **Rabot 2R**



Either of these entries can be used on the either and will be accepted by ecmk.



NOTE: *PCDF MUST be used if Rabots are evidenced and the TTZC manual entry must NOT be used as this may create a minor difference in SAP results.*

Retrofit - Common RA audit fails

10 most common auditing failures for retrofit assessments

Below is a list of our most common audit fails for Retrofit assessments. By highlighting these common fails our aim is to improve data entry on submissions for future assessments. Please note that 1 MAJOR non-compliance is an immediate audit fail.

NON-CONFORMITIES: MAJOR

1. **Data Protection Breach (GDPR)**
2. **Condition Survey**
3. **Inadequate Ventilation Evidence**
4. **Existing ventilation marked as no when IEV has been evidenced**
5. **No evidence of purge vents evidenced.**
6. **Window Sizes Not recorded as per PAS 2035**
7. **The total floor area on the PAS assessment calculation is incorrect**
8. **Measuring Door Undercuts**
9. **Open plan living spaces**
10. **No CORE Vents required**

1. **Data Protection Breach: MAJOR**
   Breach of GDPR. Anything uploaded must not show the tenants/applicants personal details as part of the retrofit assessment. Instead, please upload these images into the section called "ECO Documents" and then "Other ECO Documents". Ensure any personal information is either covered or not submitted in the main assessment

2. **Condition Survey: MAJOR**
   Answering Good to all questions is not part of the retrofit assessment procedure and will always fail as the condition of the property is one of the most important factors in assisting the Coordinator. This is poor quality evidence and unacceptable to this scheme more detail required.

Examples of good condition reports and poor condition reports

Condition	
Condition of External Walls and DPC	The external walls and DPC condition is considered to be good. Good condition.
Condition of Roof	The roof condition is considered to be good. Good condition.
Condition of Windows and Doors	The windows and doors condition is considered to be good. Good condition.
Condition of Internal Walls	The internal walls condition is considered to be fair. Fair condition.
Condition of Floor Structure	The floor structure condition is considered to be fair. Fair condition.
Is there penetrative and/or rising damp present at the property?	None
Is there evidence of condensation and/or mould growth in the dwelling?	Some damp

Condition	
Condition of External Walls and DPC	The external walls and DPC condition is considered to be good. The external walls of this property are in good condition on external inspection. There is no evidence of any re-pointing needed to the external brickwork on either the front left or rear elevations of this property, the mortar in between the brickwork is visible and continuous throughout, there is no evidence of any rising, damp or structural defects to the external walls of this property, the DPC is visible and continuous throughout..
Condition of Roof	The roof condition is considered to be good. Loooking from ground level, the roof is in good condition. There is no evidence of any missing roof tiles on either the front left or rear elevations of this property, or ridge tiles are in place, and there is no evidence of any structural defects to the external roof locking front left and rear of this property, inside the loft space. The internal roof is also in good condition with no evidence of any holes where you can see daylight, the rafters are in good condition and are free from rotten infestation
Condition of Windows and Doors	The windows and doors condition is considered to be good. The windows and doors within this property are in good condition. All external doors, fully functional and all locking mechanisms were correctly. On these doors, the internal doors are also in good condition. No evidence of any damage to the internal doors, handles on these doors are fully functional and all internal doors have handles, the windows within the property are in good condition. There is no evidence of any condensation on the internal side of these windows, or
Condition of Internal Walls	The internal walls condition is considered to be good. The internal walls within this property are in good condition there is no evidence of any structural defects or cosmetic damage to the internal walls. Inside this property, the majority of the internal walls have been painted, they have been done so to a good standard and there is no evidence of any flaking paint, or any sign of any, condensation or mould on the internal walls, the internal walls that been wallpapered have been done so to a good standard and there is no evidence any
Condition of Floor Structure	The floor structure condition is considered to be good. The flooring throughout this property is in good condition however, slight undulation is within the living room, the floors, which I think opposite of been done so to a good standard and there is no evidence that he rips or tears of the fabric of the carpet, all of the flooring throughout this property is in good condition with no evidence of any loose flooring.
Is there penetrative and/or rising damp present at the property?	None
Is there evidence of condensation and/or mould growth in the dwelling?	None

Poor Example or condition report - more detail required.

Good Example or condition report - more detailed input for RC.

Examples below of more comprehensive information for the RC:

- Condition of Roof From the external view there is no obvious damage to the roof tiles, around the chimney some repointing will be required. From within the roof space there is no daylight entering, joists and rafters all appear to be in good condition with no noticeable damp or wood rot to be seen. Roof felt again in good condition with no holes or tears visible.
- Condition of External Walls and DPC - There is a visible DPC which is approximately 100mm from the ground level and appears to be in good condition with no missing sections or broken streams. The external walls have a brick and render coating with no apparent cracks seen during the assessment.

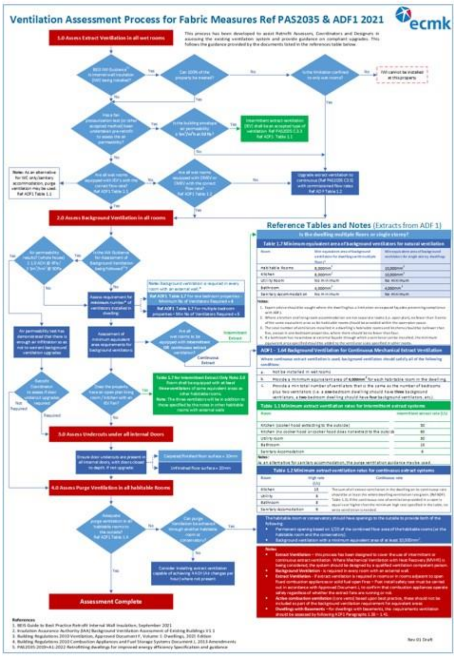
3. **Inadequate Ventilation Evidence: MAJOR**
A full photopack is required for Purge ventilation, Background ventilation and extract ventilation. Any missing information in regard to the identification of the ventilation requirements will result in major fail.

Ventilation Assessment Process

Notes

1. For **Extract Ventilation**, the flow process demonstrates a "hierarchy" of how the requirements for the type of extract fan are determined.
2. For **Background Ventilation**, the number of, location, and vent equivalent areas are determined by any air tightness testing and the type of extract ventilation installed.
3. For **Background Ventilation**, where Intermittent Extract Fans are installed, further factors determining the upgrade specification include, whether:
   - The property is a single-storey or multi-storey construction;
   - Wet rooms have external walls;
   - If there is a combined dining room/kitchen open space.
4. For **Background Ventilation**, Table 1.7 or ADF1 Para 1.64, provide guidance on the minimum number of vents required. This may be overridden by the requirement for every room with an external wall to be equipped with background ventilation.

The Ventilation Assessment Process can be found on Assessor Hub - scheme documents.



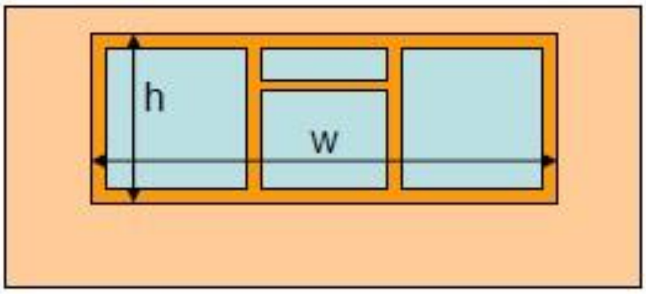
Click here

4. **Existing ventilation marked as no when IEV has been evidenced: MAJOR**
   If IEVs are present, then ventilation should be assessed accordingly for that room.

5. **No evidence of purge vents evidenced**: **MAJOR**
   For a thorough assessment of Ventilation, we require images of all windows open in the purge position. Notes should be included for any room that does not have purge ventilation.

Purge ventilated windows are required to be in OPEN position on all windows.

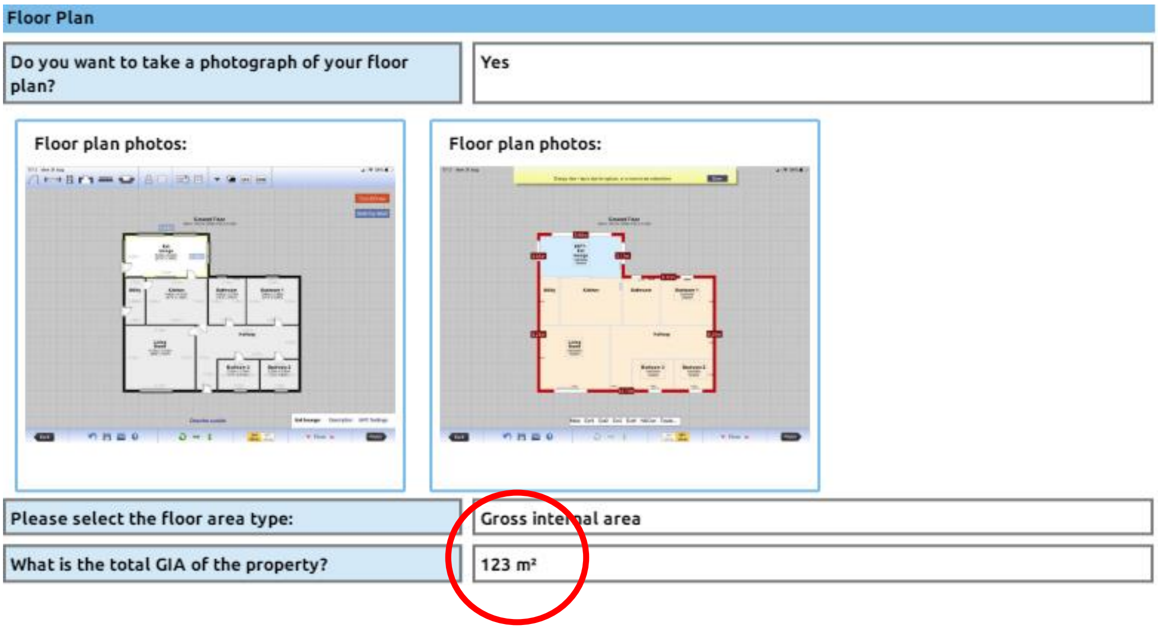
6. Window Sizes Not Recorded (as per PAS 2035): MAJOR



In PAS App (RdSAP Section) Select MUCH MORE THAN TYPICAL and input requested data for each window: PAS 2035 Assessment: Path B: 8.4.1.

The assessment shall include the following points:
A measured survey to establish the overall dimensions of the dwelling's heat loss envelope to include the dimensions of all windows. Giving the assessment a more accurate reading of the heat loss envelope and solar gain details.

7. Floor Area on The PAS Assessment Incorrect: MAJOR
The total floor area of the PAS Assessment MUST match the floor area for the RdSAP assessment.


Floor Plan

Do you want to take a photograph of your floor plan?	Yes

Floor plan photos:

Floor plan photos:

Please select the floor area type:	Gross internal area
What is the total GIA of the property?	123 m²

8. Measuring Door Undercuts: MAJOR

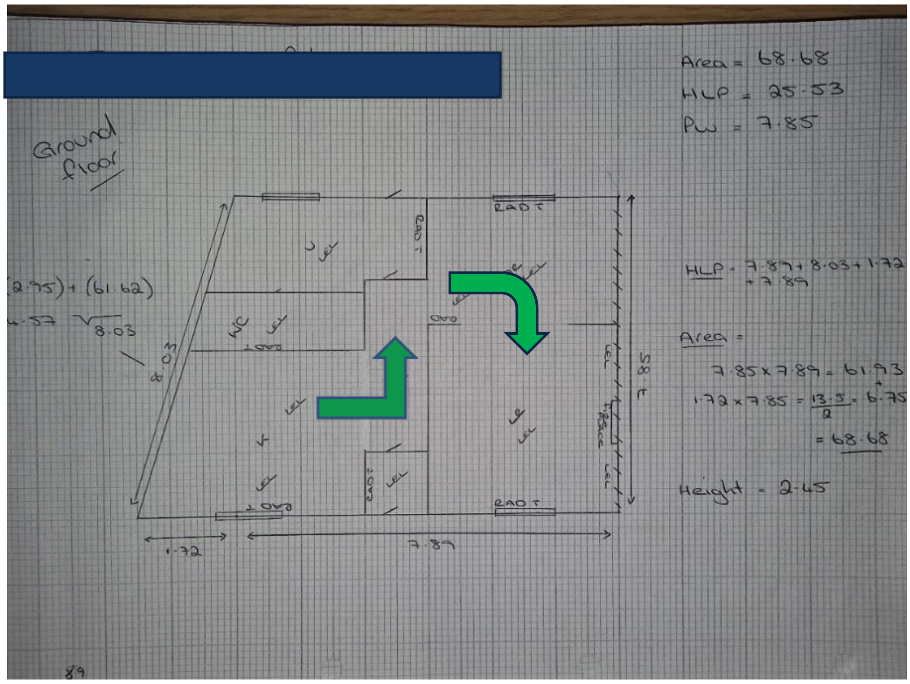
Please include good evidence of all Door Undercuts (With the door closed), with either a measure wedge or tape measure to evidence 8-10mm.

- A tape measure is acceptable however, at ecmk we would prefer reports to be completed using the door measure wedge as indicated on the left. The measure wedge gives a more accurate measurement for the RC.
- All doors must be evidenced in the SHUT position.
- Pens are no longer acceptable for ECO 4.

9. Open Plan Living Spaces: MAJOR

Kitchen/diner/studio open to other rooms within the dwelling.

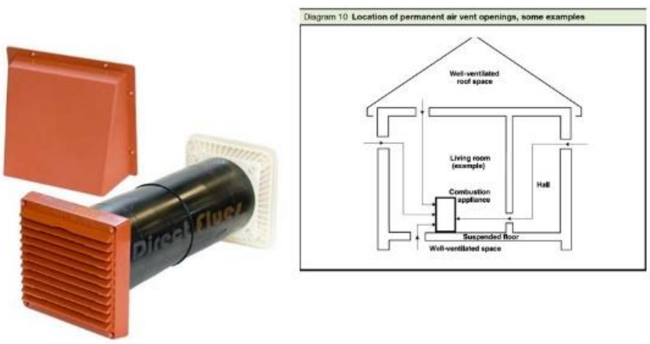
Kitchen/diner/studio has not been recorded as a wet room when it should have been in the ventilation survey.
Record all habitable rooms & wet rooms so the Retrofit Coordinator / Designer can confirm that there is adequate background ventilation.



10. No Core Vents Recorded: MAJOR
Solid fuel or gas fire present but no evidence of core vent supplied. (Major)
Evidence of a core vent, but nothing was noted in the site notes. (Major)

Note: *Combustion ventilation was recorded as adequate however no gas or solid fuel burning appliances were recorded, select no and state that no solid fuel or gas burning appliance was present.*

Combustion Ventilation



Open Flued appliances such as
- Older standard boilers,
- woodburning stoves,
- gas room heaters etc

- Fixed air vents generally found in older properties in the top corner of habitable rooms –
- evidence to be provided for these inside and out, or evidence to show that it is blocked.

NON-CONFORMITIES: ADVISORY

1. **Flow Rates**

Anemometers
The use of these is considered best practice, but not obligatory, even in PAS revision for March 2025.

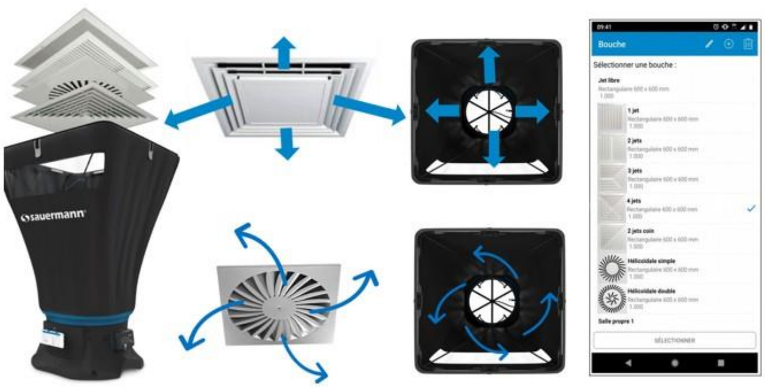
As a best practice, we recommend assessors measure this where possible to assist the coordinator in creating an accurate ventilation strategy. This is currently advisory however this may change as and when it becomes mandated in PAS 2035.

FLOW RATES (fabric measures)
Effective from April 1st 2022
Flow Testing EXTRACT VENTILATORS

Any intermittent or continuous extract ventilation fans should be checked in accordance with BSRIA guide BG46/2015 [7] to ensure that they are providing adequate air movement, and any incidence of inadequate air movement should be reported as part of the assessment.

PAS 2035:2019+A1:2022. (Amendment date 31 January 2022)
Section 8 Requirements for whole-dwelling assessments

NOTE 1:
Any intermittent or continuous extract ventilation fans should be checked in accordance with BSRIA guide BG46/2015 [7] to ensure that they are providing adequate air movement, and any incidence of inadequate air movement should be reported as part of the assessment.



Retrofit - Common RC audit fails

Common auditing failures for co-ordinators

Below is a list of our most common audit fails for RCs. By highlighting these common fails. We aim to improve data entry on submissions for future assessments.

<u>MINOR WORKS</u>

Extract fans must be fitted by correctly qualified persons and certification must be submitted as evidence.

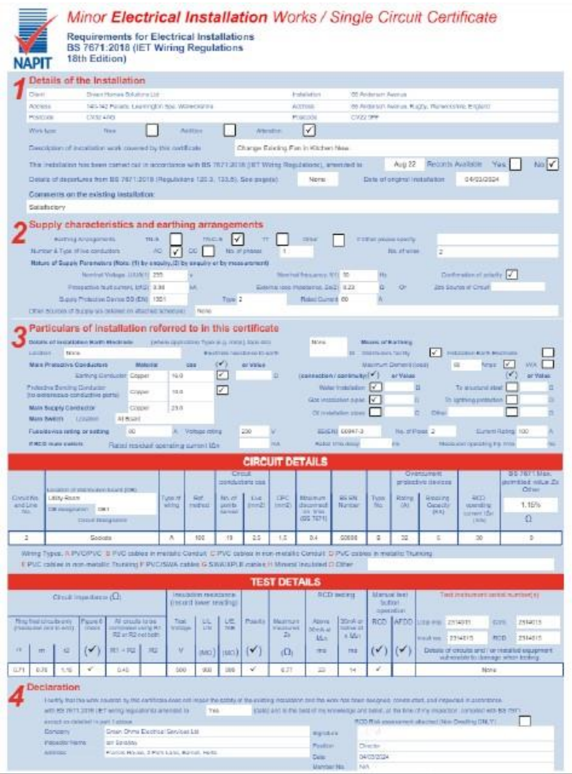
In some audit cases, Minor Works for installing fans is being missed and qualifications for the electrician are not being submitted for audit.

Proof of electrical ventilation operative’s NICEIC or BPES accreditation is specified by Trustmark. This is required by PAS 2035

DID YOU KNOW….?

Not ALL NICEIC Electricians can carry out electrical tests... otherwise known as, Electrical Installation Condition Reports, (EICR's). Just remember that because the person or company is a member of the NICEIC that they can do any electrical work, that is not correct and the correct level of qualification must be checked.

Q: Do I need a NICEIC certificate?
A: Any domestic electrical installation work undertaken on completion is notified by your fully qualified NICEIC electrical contractor to the Local Building Control Body.


NAPIT

Minor Electrical Installation Works / Single Circuit Certificate

Requirements for Electrical Installations
BS 7671:2018 (IET Wiring Regulations
18th Edition)

1 Details of the Installation

2 Supply characteristics and earthing arrangements

3 Particulars of installation referred to in this certificate

CIRCUIT DETAILS

TEST DETAILS

4 Declaration

NO DATE AND LOCATION STAMP

We see a lot of photos from installers coming through without date stamps or geotags. All submitted evidence MUST be date and location stamped.

NOTE: *this will be a MAJOR non compliance going forwards.*

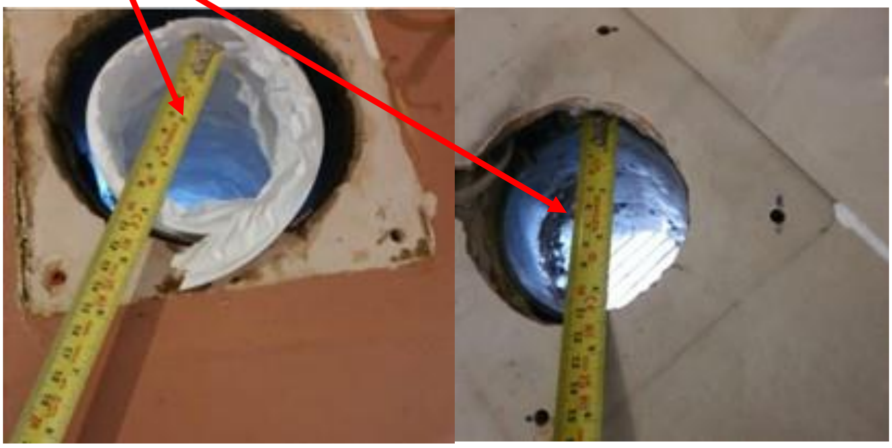
MID INSTALL PHOTOS

Photos must be supplied for mid-install as well as pre and post-install. This is often being missed and not submitted.

Good examples would include ventilation.

Only showing the fan installed with photos of the internal fan is not adequate.

We need to see mid-photos showing the hole through the wall and also the external photos.



As well as ventilation, other measures would include IWI and EWI.

Window reveals for IWI and EWI Mid and post-install photographs of side walls, header and windowsill insulation are required. Note, many installers fit plasterboard only to reveals – where insulation and specific reveal boards should be fitted.

Examples above show mid-install photographs of side walls, windows, and windowsill insulation. <u>All install photos **MUST** be date and location stamped.</u>

NOTE: *many installers only fit plasterboard to reveals - where reveal boards could/must be fitted.*

CONFLICT OF INTEREST

A conflict of interest **MUST** declared where ANY interest of the client may be at conflict with any part of the PAS installation process.

I.E: to show that the Assessor/ Coordinator/ Designer/ is employed by the Installer.

Any conflict of interest should be included either on the MTP letter or on a separate document and sent to the client BEFORE installation.

The conflict of interest should be highlighted and the client informed of the relationship, this is then documented and evidenced. The statement MUST be communicated and discussed with the client and understanding and agreement gathered and submitted as evidence.

Just completing a form does not satisfy the PAS requirements. The conflict of interest must be reviewed by the client.

Incomplete/ insufficient declarations of the conflict are a **MAJOR** fail.

6.1.5 The Retrofit Coordinator may be employed by the Client or by an organization commissioned to undertake assessment, design, installation, commissioning or monitoring and evaluation work (or a combination of these). Where a conflict of interest rises between the Retrofit Coordinator' duty to protect the Client's interest, the public interest and the employer's interest it shall be declared to the Client so that arrangements can be made to resolve it.

Conflict of Interest Statement – (available from CORELOGIC)

I the undersigned, in my capacity as Retrofit Coordinator for this project, hereby confirm that there is no conflict of interest with any parties involved with this project that would prevent me from fulfilling my role in accordance with PAS2035:2019. If you are happy with the proposed package of measures, then no further action is required. Should you have any questions or queries, do not hesitate to contact me.

PLEASE NOTE: just completing the conflict of interest form does not inform the client of the fact that RC, RA or designer may work for the install company – informing the client first is the priority, the document is for evidence that this process has happened. Incomplete or incorrectly filled forms will be classed as non-compliant.

LOFT HATCHES

As part of a loft insulation project, it is important to ensure loft hatches are correctly insulated and draught-proofed in accordance with PAS2035 and current relevant building regulations.

Loft Hatch Inspection

When assessing loft insulation as a potential measure, in addition to collecting all relevant data for the loft area, assessors should also pay consideration and record the following:

- Hatch type: hinged or removable, proprietary, or non-proprietary.
- Hatch insulation: insulated as per original manufacture – type and thickness or not insulated.
- Hatch dimensions (if insulation is required).
- Draught proofing: as per original manufacture or none
- Ladder type: none, hinged from hatch opening (not connected to hatch) or connected to hatch.
- **Provide photographic evidence of the above items and of the hatch itself.**

Figure 1 Loft hatch insulated with foil backed PIR Board

The above evidence will enable the retrofit designer to prepare a suitable design for ensuring that the hatch is correctly insulated and draught proofed.

Required level of insulation[1]

The loft hatch cover shall be completely insulated, as far as practical, to at least the same U-Value degree as the rest of the roof space. As a minimum, the requirements of the current building regulations/standards shall apply.

Under current building regulations[2], Approved Document L1, Table 4.3, loft insulation should achieve a U value of **0.16W/m2k**.

Where a loft hatch is not already insulated, the easiest material to attach to the upper side of the hatch would be rigid insulation board, which can be cut to size to fit the hatch and cut around any fixings for ladder attachments.

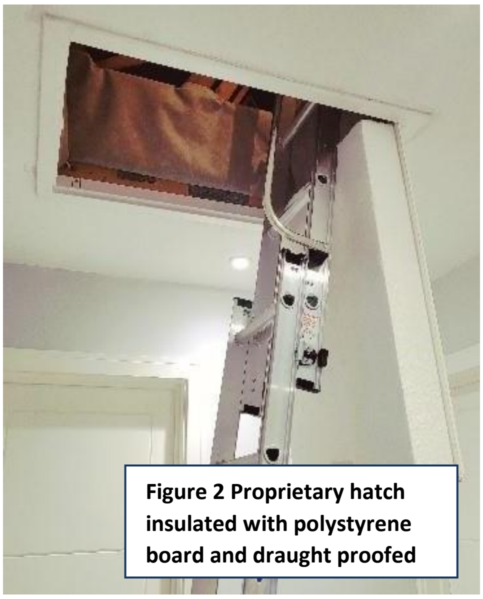


Figure 2 Proprietary hatch insulated with polystyrene board and draught proofed

Loose insulation material such as mineral wool will have to be secured in a suitable bag and attached to the upper face of the hatch – ensuring that this does not interfere with the hatch closing, however, if a loft ladder is hinged from the hatch opening, the ladder will compress this type of insulation, compromising the quality of the install. An unavoidable thermal bridge will be created due to the compressed depth of the insulation measuring less than the overall installation and therefore having a higher thermal conductivity.

Table 1.0 below provides the typical thickness of the insulation material required to achieve the above required U Value.

Table 1.0 Insulation Materials and Typical Thicknesses Required for U-Value 0.16W/m2k

Material	Thermal Conductivity (W/mK)	Minimum Insulation Thickness Required
Glass Wool	0.035 – 0.040	250mm
Rock Wool	0.034 – 0.040	250mm
PIR Board	0.021 – 0.023	150mm
Phenolic Foam	0.018 – 0.023	150mm
Polystyrene	0.029 – 0.040	200 – 250mm

Suitable methods of insulating and draught-proofing Loft hatches[1]

Loft hatches should be insulated and draught-proofed in accordance with the insulation material's specifications or installation instructions. For older properties or where a non-proprietary hatch has been used, draught-proofing can be installed using systems in a manner similar to that used for external doors – ensuring that the hatch can still be opened and closed by the occupant.

PLEASE NOTE: Loft hatches must always be insulated where practicable. Follow product guidelines for installation. If another product is more suitable for the loft hatch insulation, then that product must be considered to achieve compliance.

In the rare instance that the loft hatch insulation is not possible, then suitable notes and evidence must be submitted to verify why it was not possible to insulate the loft hatch.

Non-Domestic

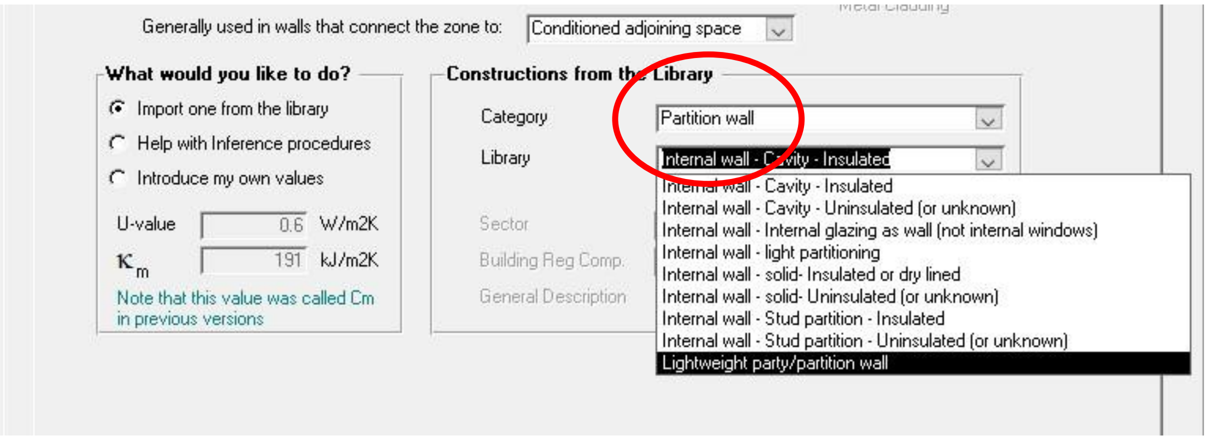
Explanation of internal constructions

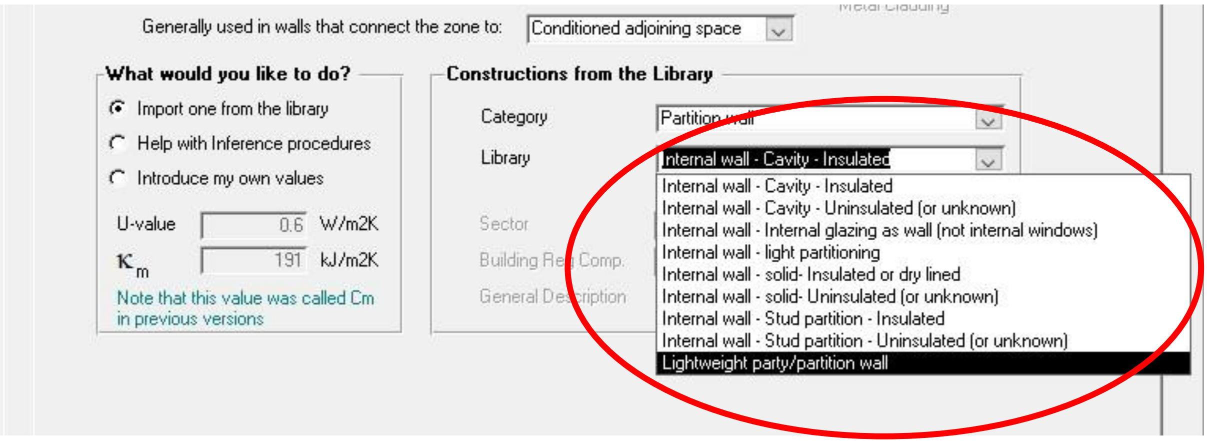
EXPLANATION OF INTERNAL CONSTRUCTIONS AND THEIR APPLICATIONS

In addition to last quarters Technical Bulletin overview and explanation of wall constructions, this quarter we have a closer look at the options available for Internal Walls for SBEM v6.1e partition wall constructions.

Following the implication of v6.1e the constructions database has been significantly updated with the current database options for internal walls now being more relevant and most importantly have been brought together into one Library category named *Partition Wall*.

In iSBEM v6.1e the *Partitions* category is in *Project database > Construction for walls > Import one from library > Category – Partition Wall > Library –* internal wall type to be selected from drop down list.





This updated range of internal wall constructions now available. This updated list is aimed at providing the Assessor with more appropriate options to be selected and to enable the building to be more accurately reflected.

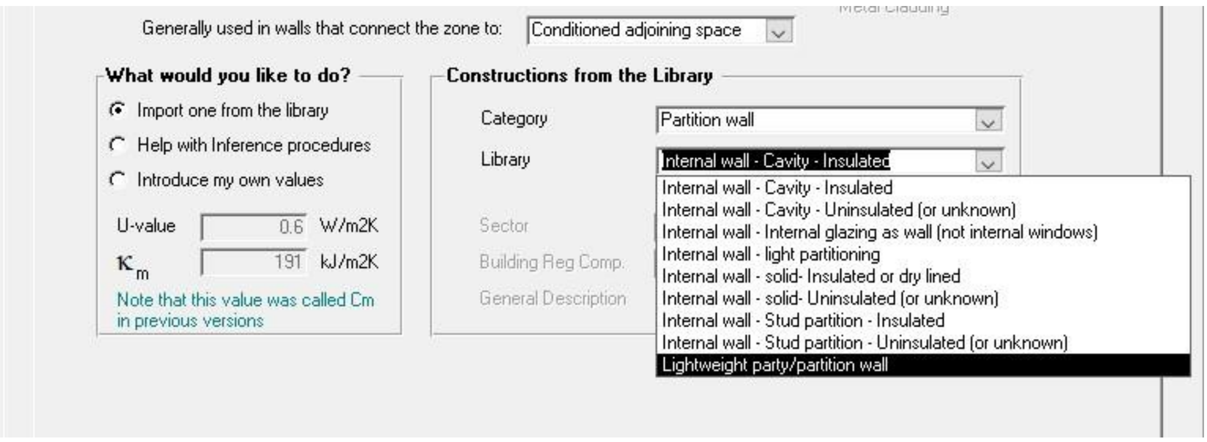
NOTE: when selecting internal wall type, if no documentary or visual evidence of insulation or dry lining can be evidenced, always select the Uninsulated (or unknown) options
(Legacy internal wall item no longer to be selected)

NOTE LEGACY INTERNAL WALL CONSTRUCTIONS

The current SBEM 6.1 database retains some legacy construction descriptions to enable data files produced in earlier versions of SBEM (this also applies to third party software's) to be updated to the current version. Thus, when updating older files to the current version the Assessor **must** review the selections and amend to the updated newer current selections now available.
The legacy internal wall description **which must no longer** be selected is listed below for convenience: -

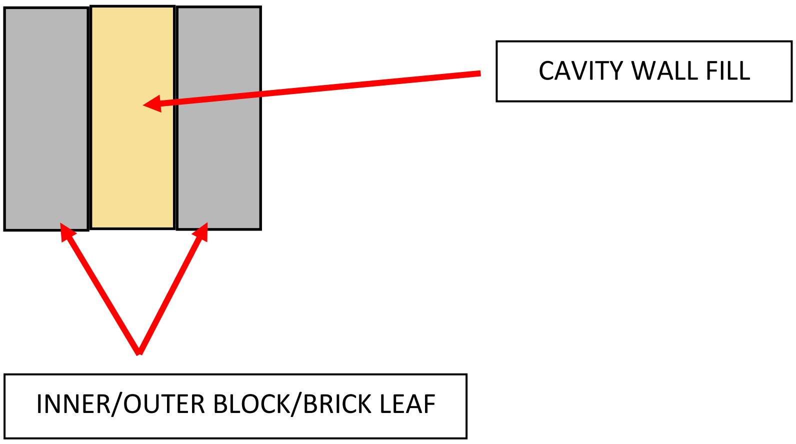
Lightweight party/partition wall (do not use this option)
Internal walls

The list of options for internal walls available to select are given below with some examples to aid understanding of application: -



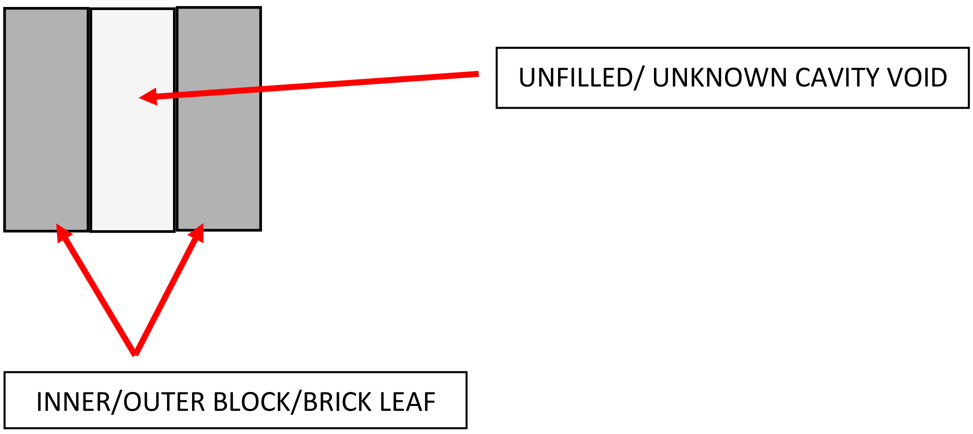
Internal wall - Cavity – Insulated

This option is to be selected when the cavity wall has become an internal wall when an extension has been added. Additionally, sometimes a cavity wall is used as a party wall or sometimes between a heated zone, such as offices and unheated zones such as an unheated warehouse. The Assessor must be able provide evidence that the wall was insulated.



Internal wall - Cavity - Uninsulated (or unknown)

This option is to be selected when the cavity wall has become an internal wall when an extension has been added. Additionally, sometimes a cavity wall is used as a party wall or sometimes between a heated zone, such as offices and unheated zones such as an unheated warehouse. This option should specifically be used where an Assessor can evidence it is a cavity wall but is unable able to evidence that the wall was insulated.

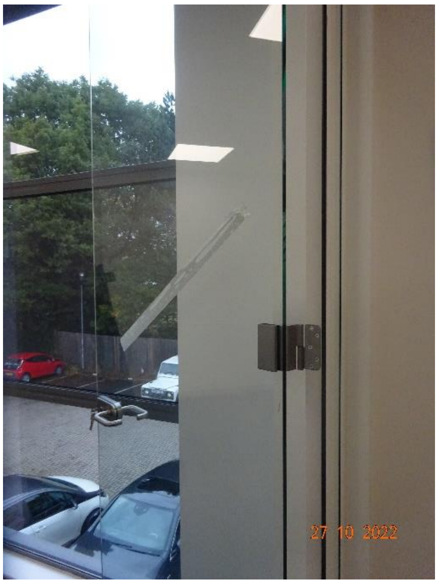


Internal wall - Internal glazing as wall (not internal windows)

In many office situations areas of full height internal glazing acting as partition walls to create offices are present, and in shopping malls the frontage of the shopping mall is internal to the mall. As these glazed areas are not subject to external weather conditions, from SBEM's perspective are not subject to direct solar gain or direct daylight, they are not classed as windows and **MUST NOT** be entered as glazing.

Such areas of internal glazing are classed as an internal wall and within the SBEM construction database the *Internal wall – Internal glazing as wall (not internal window)* should be selected.

Note small internal "observation" windows in walls should be ignored and treated as though they do not exist and entered as part of the main wall construction that they reside in.



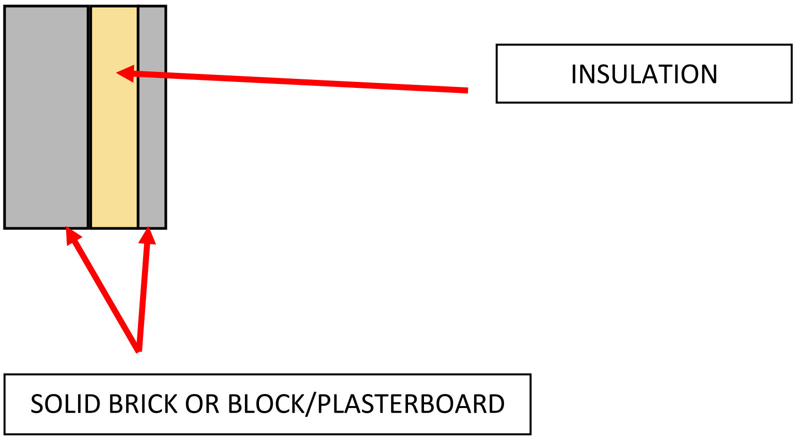
Internal wall - light partitioning

This option applies to modular prefabricated proprietary partition walls often used to create smaller offices within open plan areas and typically are thin between 50 -80mm thick. These proprietary systems often have full height glazed internal walls facing into the main office areas:

Thin lightweight proprietary partition internal wall, typically 50 – 80mm thick.
For example, used to create smaller offices within larger open plan areas.

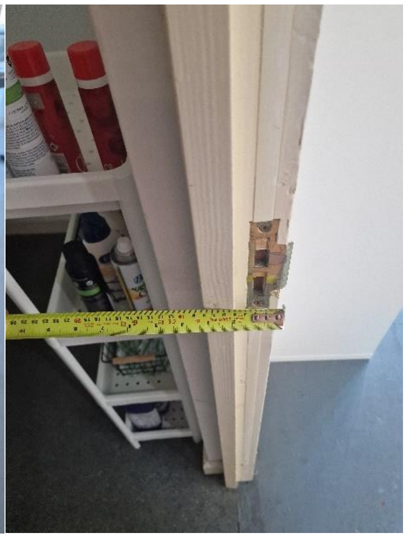
Internal wall - solid- Insulated or dry lined

This option should be used for solid internal walls where the Assessor can evidence that dry lining or insulation exists. Note the selection only applies to the side of the envelope where the insulation or dry lining exists as the kappa value will change for the uninsulated or non-dry lined face.



Internal wall - solid- Uninsulated (or unknown)
This option should be used for solid internal walls where dry lining or insulation does not exist OR where the Assessor is unable to evidence whether insulation exists.





Internal wall - Stud partition – Insulated.
This option should be used for internal stud walls where the Assessor can evidence that insulation exists.


Internal wall - Stud partition - Uninsulated (or unknown)

This option should be used for internal stud walls where the Assessor is unable to evidence that insulation exists.

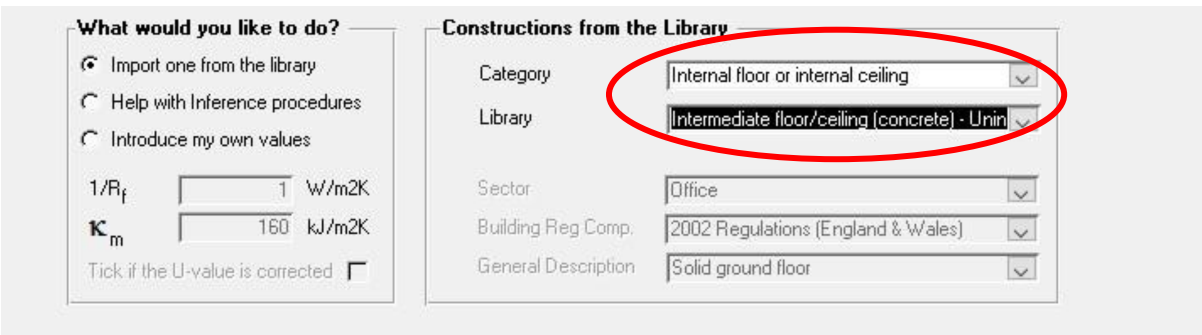
Internal floors and internal ceilings **– SBEM v6.1**

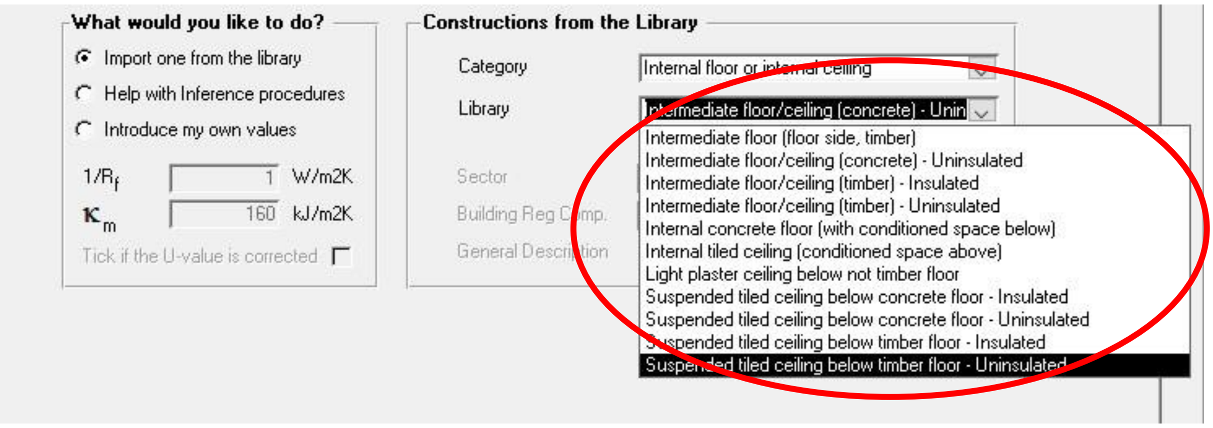
Again In response to a number of concerns that previous SBEM databases for internal floor and ceiling constructions were too limited and did not reflect many of the common situations that Assessors were being faced with on a daily basis, such as internal suspended ceilings below a timber floor, internal suspended ceilings below a concrete floor, internal floors that were insulated, the constructions database has been updated significantly. As such the current database options for internal floors and ceilings are now more relevant and most importantly have remained together in one Library category named *Internal floors and internal ceilings*.

In iSBEM v6.1e the *Internal floors and internal ceilings* category is in *Project database > Construction for floors > Import one from library > Category – Internal floor or internal ceiling> Library –* internal wall type to be selected from drop down list.

The updated range of internal floor and internal ceiling constructions now available, is aimed at providing the Assessor with more appropriate options to be selected and to enable the building, being the subject of the EPC, to be more accurately reflected.

NOTE: when selecting internal floor or ceiling type, if no documentary or visual evidence of insulation can be evidenced, always select the Uninsulated options



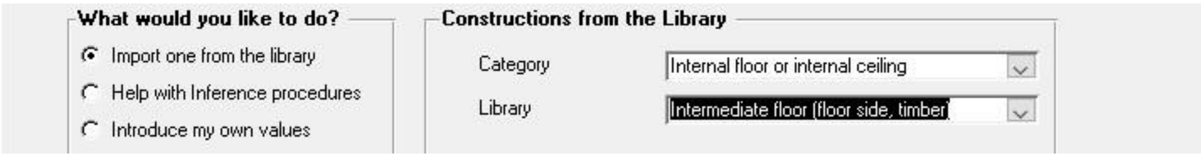


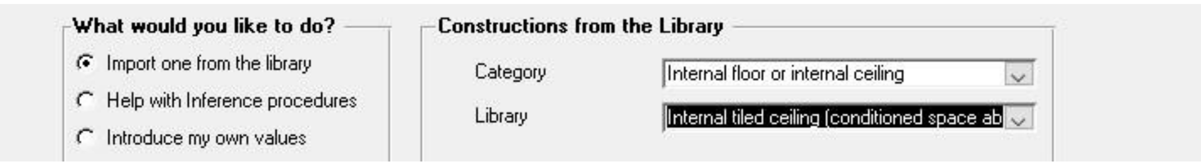
Legacy internal floors and internal ceiling items no longer to be selected.

NOTE: the current SBEM 6.1 database retains some legacy construction descriptions to enable data files produced in earlier versions of SBEM to be updated to the current version. When updating older files to the current version the Assessor **MUST** review the selections and amend to the updated newer current selections now available.

The legacy *Internal floor and internal ceiling* descriptions **which must no longer** be selected are listed below: -

- *Intermediate floor (floor side, timber)*
- *Internal concrete floor (with conditioned space below)*
- *Internal tiled ceiling (conditioned space above)*





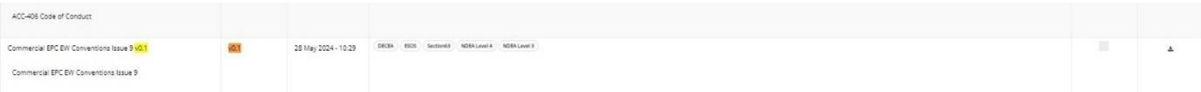
Non Domestic EPC conventions Issue 9

Download available now. Effective from 01/07/2024

New and amended conventions 9 v0.1 are now available for download from scheme documents.

The new conventions must be applied to non-domestic assessments from **1st JULY 2024.**

Please note change from v8.1 are highlighted by a light blue background.



Alternatively, you can download from the NCM website.

Upcoming training

Looking to become a qualified Retrofit Assessors?

Every building that undergoes energy retrofit work, first needs to be assessed by a trained and certified Retrofit Assessor. ecmk have developed formal training and certification to offer energy assessors. Ecmk's PAS2035 Retrofit Assessor Scheme delivers training and CPD sessions geared around the Retrofit Assessor Role whereby DEAs will be authorised to carry out a Retrofit Assessment which is a non-intrusive on-site assessment allowing a retrofit coordinator to carry out a Medium-Term Improvement Plan based on the evidence gathered from the assessment.

PAS 2035 Retrofit Assessor Course | £300 + VAT

Date: 12-13th June (9-1:30pm)

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Date: 11-12th July (9-1:30pm)

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Date: 25-26th July (9-1:30pm)

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Course	Duration	Date	Cost (+VAT)
Rooms in the Roof	1 hr	4 June	£25
DEA Bootcamp 2	1 hr	5 June	£50
PAS RdSAP – PAS2035	1 hr	5 June	£25
PAS Retrofit Ventilation – Coordinator	1.5 hr	6 June	£30
Walls – Construction Party and Alternative	1 hr	6 June	£25
Plan Up	1 hr	7 June	£25
Measuring and Modelling	1 hr	7 June	£25
Evidence Photographs and Documents	1 hr	11 June	£25
Mini Audit – DEA Tips and Hints – How Not To Fail	1 hr	11 June	£25
DEA Bootcamp 1	4 hrs	12 June	£50
SmartSurvey App - SMARTER SURVEYS	1 hr	13 June	£25
Advanced Heating	1 hr	13 June	£25
PAS Retrofit Assessment App training	1.5 hr	14 June	£30
Water Heating	1 hr	14 June	£25
PAS Condition Assessment - PAS2035	1 hr	18 June	£25
PAS Ventilation Assessment - PAS2035	1 hr	19 June	£25
Flats and Maisonettes	1 hr	20 June	£25
Heating Primary	1 hr	21 June	£25
DEA Bootcamp 4	4 hrs	25 June	£50
Heating Controls	1 hr	26 June	£25
Secondary Heating	1 hr	26 June	£25
Under Floor Insulation (UFI) R. Coordinator	1 hr	26 June	£25
Lighting and Storage Heaters	1 hr	28 June	£25
Glazing	1 hr	28 June	£25

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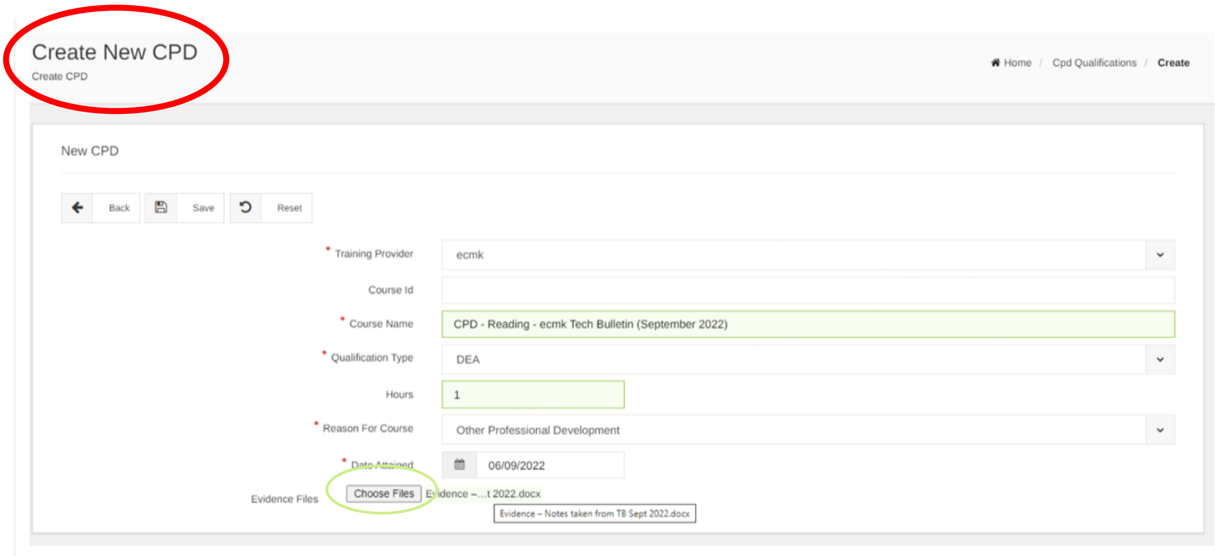

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