

10 COMMON ISSUES AND MISTAKES TO AVOID

Retrofit Assessment



An increasingly important part of the Retrofit Coordinators role is to review RdSAP and Condition Report submissions to ensure that the data provided is both accurate and compliant in terms of the conventions.

All parts of the assessment provide essential information which is used to gauge what improvement measures are suitable for the property so clear reports which present both data and an assessment of the condition of the existing dwelling are key.

The C6 Assessor Guide provides lots of useful information but the below items are the most common issues found with assessments.

CAVITY FILLED OR INSULATED AS BUILT

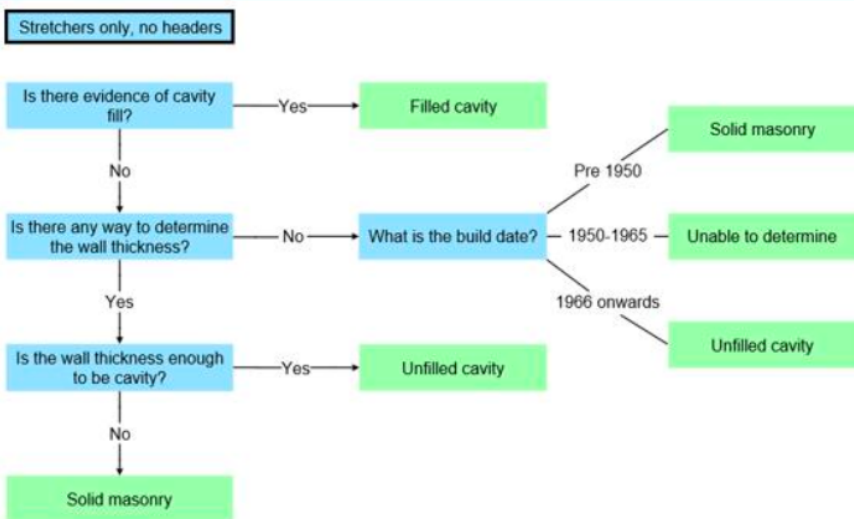
Where borescope inspections are completed in conjunction with simply looking for CWI drill holes, as we would for an EPC, we have seen a number of assessments confusing 'Filled' cavities, with cavities which were insulated on construction ie: 'As Built'. The presence of a CWI material needs to be seen in conjunction with a clear drill hole pattern for the wall to be entered as a 'Filled Cavity'. Sometimes drill holes can be difficult to see, if struggling to find them then beneath the windows is often one of the easiest places to identify them. Make sure to check every elevation, it has been known for installers to install CWI to the easy to access areas and just leave entire walls uninsulated.



The assumed u-value for the cavity wall will differ based on the construction date with insulation assumed for properties starting in the 76-82 date band. Where properties in this age band were insulated on construction the u-value assigned is 1 w/m²K however if it is recorded as filled then the u-value is 0.40 w/m²K. This can make a big difference to the SAP score and can make properties either eligible or ineligible for works under the SHF fund meaning getting this correct is essential.

PARTY WALL CONSTRUCTION

The party wall construction for conventional properties should be very simple to determine. If there are headers or flat laid blocks in the party wall then it should be recorded as 'Solid'. If there are only stretchers or blocks laid upright then the following flow chart must be followed:

2.24a	Party wall identification	Basis for determining party wall type to be entered when stretcher bond brickwork / blocks face on only and laid upright are encountered and there is no other specific construction evidence.  <pre> graph TD Start[Stretchers only, no headers] --> Q1{Is there evidence of cavity fill?} Q1 -- Yes --> Filled[Filled cavity] Q1 -- No --> Q2{Is there any way to determine the wall thickness?} Q2 -- No --> Q3{What is the build date?} Q2 -- Yes --> Q4{Is the wall thickness enough to be cavity?} Q4 -- Yes --> Unfilled[Unfilled cavity] Q4 -- No --> Solid1[Solid masonry] Q3 -- Pre 1950 --> Solid2[Solid masonry] Q3 -- 1950-1965 --> Indet[Unable to determine] Q3 -- 1966 onwards --> Unfilled2[Unfilled cavity] </pre>
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A common mistake is to see headers on a party wall which has been entered as 'unable to determine' or 'unfilled cavity', typically this will be a single SAP point difference which can sometimes make all the difference.

WALL CONSTRUCTION TYPE FOR EXTENSIONS

We often come across properties which are of cavity construction but have extensions to the side or rear.



Sometimes these are part of the heat loss perimeter, sometimes they are not. Sometimes they are heated, sometimes they are not. Sometimes they are cavity construction, but most often they are solid brick conversions of old sheds / storage areas. It is important that all of these variations, as well as the use (wet room, habitable room, storage, not used) are made clear as part of the assessment.

A common mistake we see is for these extensions to be assumed to be same construction of the main dwelling but when we look at the condition report, the window reveals are clearly not deep enough for the construction to be a cavity wall. It is essential from an audit, compliance and planned works perspective that the wall constructions on all extensions and alternative walls are identified properly and wall thicknesses evidenced:

Main property:



Extension:



LOCATION OF EXTERNAL DOORS

Where properties have extensions, it is not always clear on Condition Reports where the external doors (the doors which form the Heat Loss Perimeter) of the property are, and what quality and condition they are in. The quality and condition often determines whether an extension should be included on the assessment or not.

This is a particular issue where a door separates the main property from an extension or sheltered area, it is not uncommon for the door to be of internal quality. If the extension is insulated and heated then this is fine however if an extension is uninsulated and unheated then this can cause a huge amount of heat loss which can easily be mitigated by installing an external quality door on the heat loss perimeter. Therefore, a very clear picture of the quality and condition of the door is an essential part of the Retrofit Assessment.

Poor quality door with no draught proofing replaced for external quality door:



AGE CONDITION OF WINDOWS AND DOORS

The decision to replace windows and doors can often be subjective and made based upon both age and condition, this means that these things really need to be included as part of the Retrofit Assessment.

While age may not always be able to be determined, a thorough inspection of the glazing gaps and frames should be completed to see if a manufactured date can be found. In rare cases you may even find the u and g-values. A check of the FENSA website should also be completed and this is often a very useful resource:



Once age is determined, the condition should be evidenced as not all older windows or doors will be in poor condition, and not all new windows or doors will be in good condition. Sometimes a repair may be more financially viable or appropriate so the more detail the better. Typical pictures of windows should include the glazing gaps, external sealant, evidence that they open fully and evidence that seals are in good condition plus evidence of any defects found, blown glazing or excessive condensation such as below:



SCEILING INSULATION

Sceilings (sloping ceiling sections) can be awkward to insulate at the best of times and can often require roof tiles to be removed externally to install insulation which mitigates the thermal bridge effectively. If these sections can be evidenced as being insulated already then this can save additional investigations and potentially remove the needs for further works, we would be looking for evidence that these sections are in good condition internally with no damp or mould and that insulation is present between the rafters:

Well installed insulation board evidenced in multiple locations:



No damp and mould related issues seen internally including in a wet room:



UNDERCUTS

Undercut compliance is a very common issue with both assessments and installations. The undercut must be 7600mm² where there are floor coverings and twice this where there are no floor coverings. A common issues on Condition Reports to see undercuts which have clearly been measured as non-compliant but are marked as compliant on the report:

Are the undercuts on all the internal doors (7,600 mm² gap)? Yes



Below are examples of how undercuts would ideally be evidenced and their associated calculations:



Undercut: 10mm
Door width 763mm
Equivalent area: 7630mm
Compliant



Undercut: 12mm
Door width 669mm
Equivalent area: 8028mm
Compliant



Undercut: 2.5mm
Door width 670mm
Equivalent area: 1675mm
Non-Compliant



Undercut: 6mm
Door width 819mm
Equivalent area: 4914mm
Non-Compliant

The slider on a typical door wedge should be moved out of the way so the measurement can be clearly seen.

The below extract is from a Coordination audit, while the practice of using a pen or pencil has now been rightly stopped, it is useful for some of these other comments to be shared.

4) Condition Report Undercuts – As a minimum, every undercut must be photographed, with the internal doors closed, and a gap gauge (not pen / pencil / tape) used to clearly show the undercut depth. Here, A) a pen has been used (which is less than 10mm width, and appears to be forcibly pressed into the carpets under some doors). Please be careful to check these as this could have a significant impact upon funding if investigated, and could also lead to issues with the property / occupant health if PAS 2035 compliant ventilation upgrades have not taken place. If any evidence supplied is incorrect or missing, the RC should ask the RA to re-issue where necessary. TrustMark are aware that in some instances these have been manipulated and as a result they are now receiving extra scrutiny, including in the form of checking ventilation during strategic property visits. Please read the following link for further details:

EXTRACTION: INTERMITTENT OR DMEV

When evidencing fans, the most common and key item to record is whether a fan is intermittent (IEV) or continuous (dMEV).

Under RdSAP10, where a property has even just a single dMEV, it should be recorded as ‘mechanical extract, decentralized (MEV dc)’.

Identifying a dMEV is fairly easy – they will have a trickle rate so will be running continuously. Below are some common types found across social housing in particular:

Envirovent Filterless Infinity and Filterless



Greenwood Airvac / Unity. Nuaire Faith Plus



Vent Axia Revive 5 and 7



Vent Axia Response 7



Vent Axia Centra



Intermittent fans will often be older, thinner and only turned on via a pull cord or operated via a light switch, such as these models:



Evidencing of ducting and flow rates are all explained in the C6 Assessor guide but simply identifying the correct type of fan is the first thing to get right.

BACKGROUND VENTILATION

A typical ventilation strategy for a property with dMEV will require a minimum of 4000mm² of background ventilation for each of the habitable rooms. This makes measuring the existing trickle vents accurately very important however, it is noted that an exact measurement of the equivalent area is extremely difficult to gauge during a non-intrusive inspection.

External photos of all windows should be taken to show whether / the number of trickle vents present within each room. Trickle vents should also be marked up on the floorplan. There should be no trickle vents in wet rooms where dMEV are installed.



On newer windows there may be evidence of the equivalent area supplied by each trickle vent, if it is present then please evidence this. If this is not present, then a dimensional measurement should be taken and recorded on the condition report, measurement evidence of each size is required ie: if all trickle vents are the same size then only one photo is required. Typically a trickle vent can be presumed to be 10mm wide.



Please include all background ventilation that is present, not just trickle vents. Core vents may need to be closed as part of any airtightness improvements planned by the designer or coordinator or may be used as an alternative to trickle vents to gain compliance with Part F:



REPORT CREATED IN LOGICAL AND CONSISTENT ORDER

Submitting a report which follows a consistent and logical structure can make life a lot easier for the Retrofit Coordinator. A basic structure might be:

- External Elevations
- Roof
- Walls and Openings
- Loft
- Wet Rooms
- Habitable Rooms
- Heating
- Lighting
- Miscellaneous

The more searching that the Coordinator has to do, the more frustrating a report will be to read, see our example reports for how we set out our condition reports.