



CONTRACTING FOR PAS 2035 COMPLIANT RETROFIT

PHASE TWO – A LIVE TEST AT ST HELENS CEMENT CITY
BRIEFING 2: RETROFIT ASSESSMENT



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1. Introduction

This is Briefing 2 of a series of five that captures lessons learnt from a live test of PAS 2035 compliant assessment (and coordination) undertaken by The Retrofit Academy CIC on behalf of the Local Energy North West Hub (LENW Hub).

This piece of work follows on from Phase 1, which consisted of a desktop study entitled; “Contracting for PAS 2035 Compliant Retrofit – A Guide for Local Authorities” [Retrofit Academy]. The Hub wanted to consider factors relevant to procurement and the contracting of Retrofit Assessors (RA/RAs) and Retrofit Coordinators (RC/RCs). Within Phase 1, four delivery models were described in response to discussions around PAS 2035 delivery for local authority led retrofit programmes.

There will be five key areas covered in a series of briefing notes that describe learnings from the live test, which investigate the PAS 2035 compliant retrofit from inception up to the lodgement of the Medium Term Improvement Plan (MTIP) as outlined below:

1. Pre-programme Activities
- 2. Retrofit Assessment**
3. Medium Term Improvement Plans and Retrofit Coordinator Tasks
4. The Customer Interface – Assessment and Coordination (Up to Design)
5. How to Ensure an Effective Handover

2. Further Information

Further information on this pilot project, including background information, methodology and the site is contained in:

Briefing Note 1: “Pre-programme Activities” (which includes the contextual information about the project).

Briefing Note 3: “Medium Term Improvement Plans and Retrofit Coordinator Tasks”

Briefing Note 4: “The Customer Interface – Assessment and Coordination (Up to Design)”

Briefing Note 5: “How to Ensure an Effective Handover”

Briefing 2: Retrofit Assessment

This is the second briefing in the series and will cover retrofit assessment. It is important to be clear that PAS 2035 requires a whole house assessment which is quite different to a property survey for something like an Energy Performance Certificate (EPC). More time is needed and there are more elements required. There are four sub-sections to this briefing. These are the essential issues to inform the assessments and feed into the Improvement Options Evaluation and Medium Term Improvement Plan which are the subject of the next briefing note in the series.

- A. Off-site assessment preparation**
- B. Customer engagement**
- C. Key elements of a compliant assessment**
- D. Software and lodgement**

A OFF-SITE ASSESSMENT PREPARATION

Address lists do not tell the whole story, so it is important for an assessor to do some work before planning site visits and attending site:

1. Establishing the detailed scope of the assessment at the outset of the project will avoid additional work and potential costs later.
2. To ensure that the right length of visit is planned to get all the information, the assessor needs to understand things such as property type, size and location. Google Maps can be used to understand if there are trees, basements, extensions, boundary issues, etc.
3. Customer needs, such as for a signer/interpreter etc, need to be known – on the St Helens project that was a need for 1 out of 40 households. There have also been three homes where a risk assessment on housekeeping standards resulted in a referral for further assistance. These cases accounted for 8% of the project.
4. Any antisocial behaviour issues or risks to staff also need to be known and planned for – on the St Helens project there were two addresses flagged or 5% of the project. These homes require two people to attend.



Key Lesson – Scope: Ideally a detailed scope should be agreed before assessments begin. This should include the Funding Client, RC, RAs, and the Retrofit Designer (RD/RDs). The Retrofit Academy's PAS 2035 Compliance Process Map and a survey checklist could help to ensure clarity.

Key Lesson – Preparation: Quality assessments and effective responses to resident needs require good off-site preparation.

Key Lesson – Energy Advice Review: Best practice is that the RA should review any energy advice provided before their assessments.

B CUSTOMER ENGAGEMENT

Even the best pre-work cannot build a rapport with the customer to make them feel at ease, enable the assessment to be done thoroughly and increase the customers' confidence in retrofit as an option. St Helens provided Osmosis ACD with a client list from their original lead generation activity.

1. Our assessors built time into the appointment slot to explain the process of the assessment to the customer and ask them for any concerns or if they knew of any previous works carried out to the property. This can take time, particularly with elderly and vulnerable people who may need more time to process complex and technical information concerning their home.
2. There can be an overlap with energy advice and assessment activity. In this project energy advice (and lead generation) were not part of the assessment contract. It is understood that this estate has been the focus of energy efficiency measures over many years, so some of the advice previously provided to householders may now be very dated. RAs should ensure that their communications are coherent with the project objectives, project outcomes and PAS 2035 compliant energy advice from the Retrofit Advisor (RAAd/RADs).
3. RAs need access to all areas – lofts, basements, extensions that are permanent and also sheds etc that are around the property. This can be time consuming and occasionally raises safety concerns.
4. The RAs found that the residents generally wanted to chat at the end of the process about what they had found and next steps. At the assessment stage in a PAS 2035 compliant project, it will not be clear what measures are appropriate. This can be tricky for the assessor as they may be asked by the resident to give their opinion on what measures should be introduced or comment on previous installations and quality. The next steps advice needs to reflect the RC's role in developing the MTIP and suggested measures in agreement with the local authority client – Liverpool City Region Combined Authority (LCR CA) in this case.



Key Lesson – Assessments per Day: Three assessments per day was the maximum that could be done to the standards required and with the chance for good customer service. This is what The Retrofit Academy would use as a guide.

Key Lesson – Next Steps: The assessor needs to understand and communicate to the resident what the next steps are for them.

C KEY ELEMENTS OF A COMPLIANT ASSESSMENT

A compliant assessment is typically more comprehensive than the survey conducted by a Domestic Energy Assessor (DEA) for an EPC or by an installer for one or two simple predetermined measures. Some measures do require further tests (such as a pull-out test for EWI).

1. PAS 2035 provides a very detailed scope for the assessment of homes under all three risk Paths. A well-trained and competent RA should understand the requirements of each Path.
 - a. However, retrofit coordination activity in setting initial outcomes with the Client, coordinating with the Advisor, and coordinating with the Designer should all feed in to the fine detail of what is required in the assessments.
 - b. It is also wise to test early assessments with the RC and RD to ensure that everything needed for design is being collected (preferably from a single visit).
 - c. In this pilot, there was significant time pressure on the gathering of assessments. The RC was appointed after some assessments had been undertaken. The RD was not in place at the time of the assessments. This led to assessments being undertaken ahead of the ideal process. This creates the risk of further work being required when assessments are subsequently reviewed.
2. Detailing the scope of the assessment prior to the visit is the most efficient way to ensure all elements are covered. This also allows for additional requests to be made.
3. There are a variety of items in an assessor's toolkit, some of which are shown in the photographs. These include some that are essential (E) and others that are suggested good practice (GP)
 - a. ladders to access lofts and lights (E)
 - b. damp meter to take moisture readings where necessary (GP)
 - c. gauge to take measurements of the gaps under each door to assess the tolerance (E)
 - d. tape measure for depth of walls insulation (E)
 - e. digital laser tape for room measurements including openings (GP)
 - f. air flow meter for vent performance (GP)
 - g. boroscope (and associated) (GP)
 - h. thermal imaging device (GP)
4. Photographs are commonly taken as evidence. These are not always enough for an RC who needs to review the assessment data – for example, a video would be far more appropriate to evidence the efficiency of a vent than a photograph.
5. It is possible to upload information into an app on-site, which can save time and therefore money.
6. Time to review and reflect on pictures and survey information can be beneficial. For example, in one of the properties, there was a wall that appeared to be a standard cavity. The photos taken and subsequently reviewed allowed the assessor to see that the wall was slightly narrower, which resulted in a boroscope inspection and the detection of an unfilled narrow cavity.



Key Lesson – RC: The RAs should not be appointed before the RC. Coordination activity including the Client, the RAd and the RD should feed into the assessments. Hence, assessments should not commence prior to the appointment of the RC.

Key Lesson – PAS 2035 Risk Pathway: The Assessor should be provided with a copy of the risk assessment – clarifying the correct risk Pathway.

Key Lesson – Assessment Time: Allowing more time at this stage to collect and reflect on information may give better diagnostics for the RC on which to base recommendations for measures.

Key Lesson – RD Input: Coordination with the RD after the first one or two surveys enables the best solutions and most effective use of time – therefore impacting cost.

Key Observation – Quality Assessments: The market is seeing an unintended consequence from the introduction of EPCs carried out by DEAs. There is now an expectation that surveys be done quickly and cheaply to deliver assessments of property energy performance. The value of a comprehensive and PAS 2035 compliant assessment is not currently recognised widely. The quality of a retrofit assessment is often reflected in the subsequent quality of the retrofit itself. This was a key lesson learned from Retrofit for the Future.

D SOFTWARE AND LODGEMENT

Software challenges are creating some frustrations for contracting authorities with the delivery of projects.

1. There should be one visit and one assessment that contains several different elements. PAS 2035 requires the following documents to be completed and then lodged as part of one comprehensive assessment: Energy Performance Report, Condition Report, Reduced Data Standard Assessment Procedure (RDSAP) / full SAP, Occupancy Assessment, and the site notes.
2. The occupancy assessment data required and the options to upload are limited. For example, heating patterns and actual fuel bill information cannot be recorded. The way that someone lives in their home is vital information both in terms of the proposals for measures and the advice and education given to the resident.
3. Condition reporting software can add a considerable amount of time to an assessor's workload. The Condition Report is broken down into external and internal sections. All internal room elements within the property must be recorded. In the software, room elements must be inputted separately room by room, where each section has numerous drop-down boxes with a limited amount of picture evidence (ten pictures per section). All elements need to be uploaded and actioned before being allowed to move on to the next room. External elements like lofts, basements and property elevations are the same with limited pictures and areas for text. In a standard 3 bed semi-detached house you can have at least eight internal rooms and five external elements. The ideal solution would be to have software that allows unlimited picture evidence or video footage that can paint a true picture of the condition of the property that is easily transferable to the RC.
4. There is a question over when to confirm the initial outcomes that have been set out with the Funding Client. The assessment provides the first real opportunity to talk about the way in which a resident lives in their home and uses energy.
5. The assessment data lodged in the TrustMark database belongs to the homeowner (the owner-occupier or landlord). It is for them to agree who can access and use the data. Some kind of release permission form may be appropriate to ensure that local authorities can access the information.



Key Lesson – Scanning Technology: Use of an internal laser scan that produces a walk through for each archetype enables the RC to see the whole building, as well as recording the building dimensions. This may save up to an hour in recording data in the property and also ensures accuracy.

Key Observation – Software Incompatibility: Different accreditation schemes use different software packages, which can make it difficult for later stakeholders to efficiently pick up existing information. Ideally cross platform compatibility would be established to resolve this problem. For clarity, this applies to different versions of SAP/RDSAP.

Key Lesson – Ensuring Software Compatibility: Establish the software used through the delivery chain and perhaps specify what is required. This may be challenging, but it would avoid duplicated effort. If software is not compatible, the RD and/or RC will need to manually repopulate energy modelling information onto their platform. The format for information should be clarified at the outset. This will help to fully understand information provision and potentially highlight compatibility issues. Third-party 'survey' software may be appropriate to gather site information.

Key Lesson – Outcomes Review: Outcomes should be reviewed after Assessment are undertaken. Information from assessments may feed into changes or adaptations of initial outcomes.

Further information

Previous briefing

1. Pre-programme Activities

The next briefing in the series is 'Medium Term Improvement Plans and Retrofit Coordinator Tasks', which covers:

- Preliminaries: Advice and setting outcomes
- Risk assessment
- Dwelling assessment
- Improvement Options Evaluations
- Medium Term Improvement Plans
- Software and lodgement / handover

Subsequent briefings cover: Customer Interface and Handover.



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