

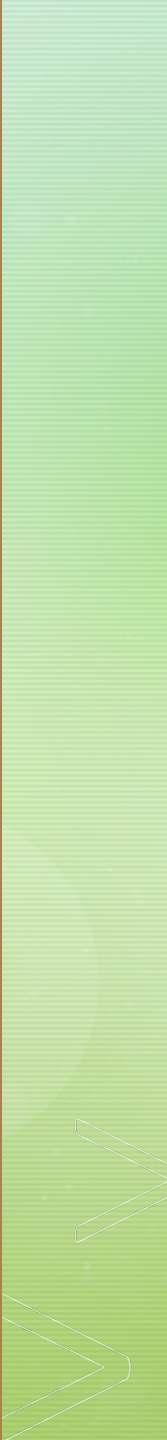


PAS2035 Conflicts with Traditional and Heritage Buildings

5 Critical Conflicts and Dilemmas

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About PAS2035

- Introduced in 2020
- Has specific assessment requirements for traditional construction, and further requirements for protected buildings
- Sets out minimum specialist qualifications for team members overseeing work on traditional and protected buildings (Both Assessment and Design)
- Lays out quality assurance processes, with an aim to minimising risk
- Requires ventilation be upgraded along with fabric improvements

The Assessment Dilemmas

- Annex A of PAS2035 requires that Assessors and Designers of upgrades to Protected buildings (including those in conservation areas) have additional qualifications in retrofitting older and traditional buildings.
 - Not all buildings in conservation areas are older and traditional construction,
 - Not all energy efficiency measures have an impact on heritage and traditional construction (adding TRV's, for example)
 - This educational requirement doesn't apply to older and traditional buildings which are not designated as '*protected*',
 - There is a fundamental mis-match between the qualification requirement and it's requirement in addressing traditional construction, by having tethered the requirement to *protected* buildings, not traditionally constructed buildings,
 - Even if it did apply to traditionally constructed buildings, there's often no way of knowing what the underlying construction is until *after* the assessment is undertaken, risking dual assessment visits

The Assessment Dilemmas

- Clauses 8.4.3 and 8.5.2 of PAS2035 requires that Assessors carry out a Significance Assessment of any traditionally constructed or protected building to identify any traditional features or attributes of note
 - There is no enforceable requirement to then *do anything* with that assessment, beyond lodge it with TrustMark,
 - There is no requirement to restore or reinstate traditional features or even a requirement that they *not* be aesthetically undermined with energy improvements,
 - Because the additional training requirement is placed on the assessor of protected buildings only (and assessors don't determine the strategy of the retrofit), the standard can't refer back to their professional expertise,
 - At the moment, this requirement is a paperwork exercise, which isn't adding any value to the client, in practice.

The Path C Default Dilemma

- Annex C dictates that any Protected building automatically fall into a Risk Path C (even if it's conventional construction)
 - This places a requirement for before and after air pressure tests and additional assessment criteria, even if the work will not impact the heritage, airtightness, fabric or aesthetics of the building (i.e. boiler replacements or adding TRVs in listed buildings),
 - Likewise, the Path C requirements for the teams qualifications is higher than Path A and B, and thus carries additional overheads even when the work being carried out is largely inconsequential to the fabric and heritage of the building;

The Ventilation Dilemma

- Annex C sets out extensive requirements for ventilation, including purpose-provided air intakes, in the case of any fabric upgrades
 - Trickle vents are often not allowed to be retrofit into existing heritage joinery, and wall vents would be considered an 'even worse' alternative, leaving no viable option for purpose provided air intakes, as required, for every habitable room in many heritage buildings;
 - Secondary glazing becomes completely unworkable, from a compliance standpoint, due to this issue despite it being an excellent solution for homes with heritage windows;
 - It requires a fully functional ventilation system to be installed, even if only minimal fabric upgrades are being undertaken (i.e. door replacements or loft top-ups), and does not take into consideration the existing 'leakiness' of the property;
 - This has been 'resolved' with the IAA Assessment protocol, which uses the PULSE pressure test to quantify passive background infiltration, which then marries up with the new Part F, but it requires air pressure testing on every property;

The Insulation Dilemma

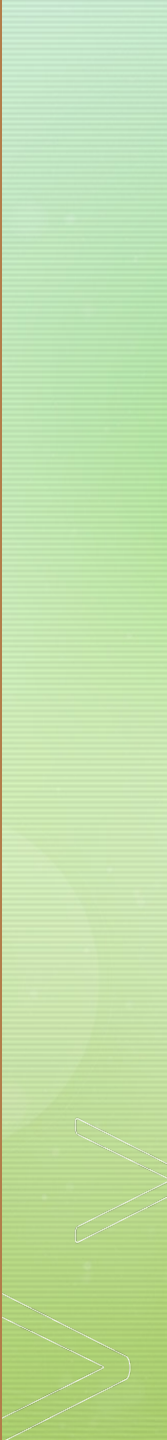
- The Retrofit Coordinator training, Level 3 training in Energy Efficiency in Traditional Buildings and Heritage qualification requirements all set out in Annex A impress on professionals the importance of vapour-open insulation work on traditional buildings, using materials such as wood fibre, lime-based insulating renders, calsitherm, hemp, jute, sheeps wool and other natural materials and fibres. Professionals should be specifying these materials wherever appropriate in order to discharge their professional duties with regards to maintaining vapour balanced construction. That's why they're required to have the additional professional training, in the first place...
 - PAS2035 requires that all insulation works be carried out under PAS2030 requirements for those measures, which includes a TrustMark requirement for 20 year insurance-backed warranties for most insulation measure...

The Insulation Dilemma

- There is currently not a single vapour-open IWI or underfloor insulation system available on the market, with the required IBG and BBA certificates to allow them under PAS2030;
- There are no wood fibre EWI systems available on the market with the required IBG and BBA certificates;
- The only current options are mineral wool insulation systems (which almost all include vapour barriers, making them vapour-closed),
- Nearly all EPS EWI insulation systems have allowances on their BBA certificates to install on solid masonry walls, despite the fact we know perfectly well that is not an appropriate ...
- BBA Certificates stating the scope of install substrates appear to be completely without credibility!



In Conclusion

- There is a significant disjoint between what we know we need to do in heritage and traditional buildings to improve performance, and how compliance currently dictates we discharge our professional duties.
 - There is a lot of work to be done, here!
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The End!

Thank you!

