PAS2035/

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Agenda

- What is PAS2035.
- Roles, Responsibilities and Qualifications.
- PAS2035 Process.
- Risk Path A,B or C?
- Improvement Option Evaluation.
- Medium Term Improvement Plan.
- Monitoring and Evaluation.
- Any Questions.

What is PAS2035?

- PAS 2035 is the over-arching document in the retrofit standards framework. It was introduced following the recommendations of the Each Home Counts review. It details how to carry out quality energy retrofits of existing domestic buildings, alongside best practice guidance for implementing energy efficiency measures.

- All projects funded by the Social Housing Decarbonisation Fund, Energy Company Obligation, Local Authority Delivery Scheme or Home Upgrade Grant will be required to comply with the standard.

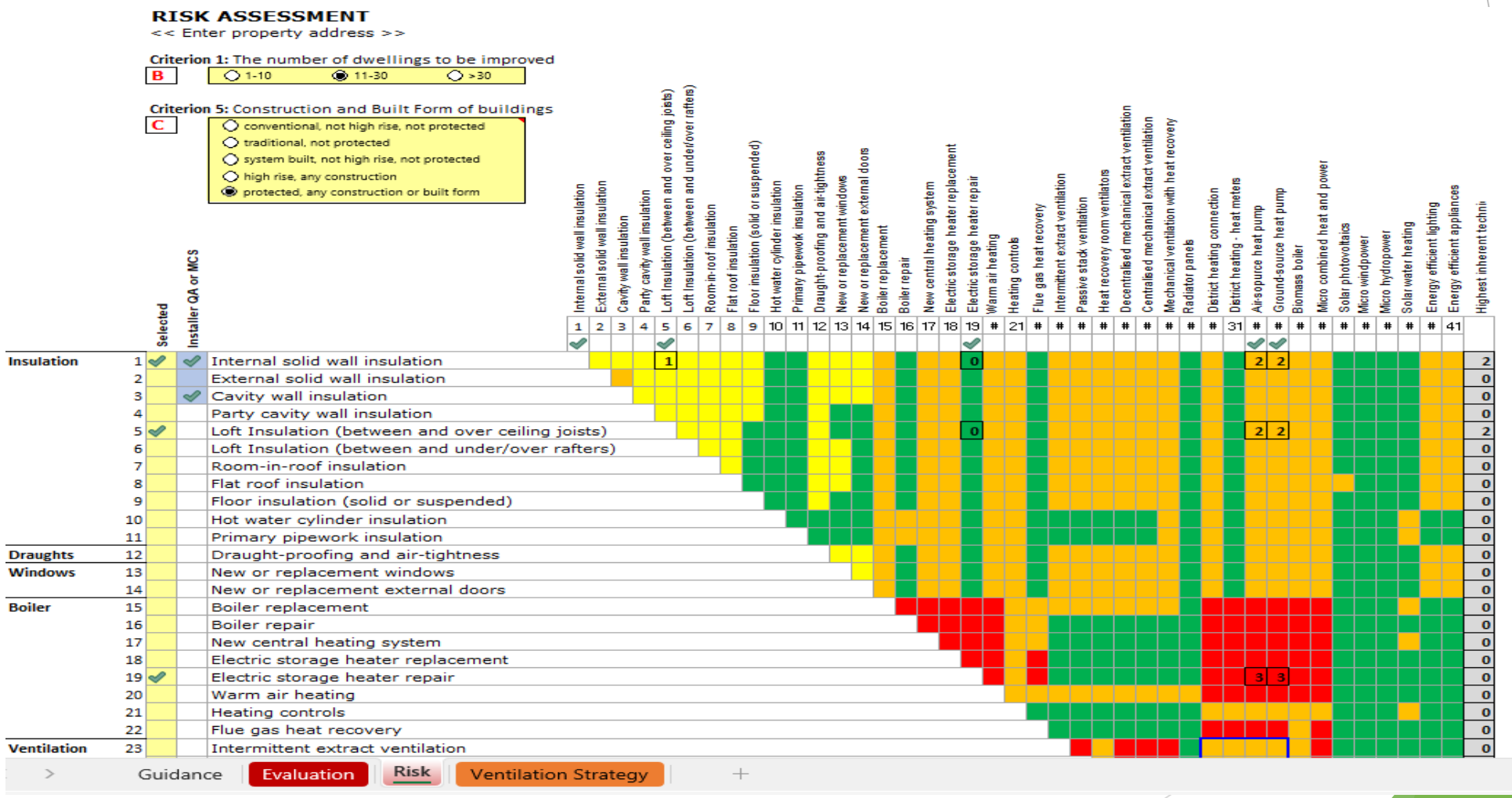
Roles, qualifications and accreditations

Role	Role Description	Qualifications Required	Accreditations Required
Retrofit Advisor	Deliver retrofit advice to clients and householders	City and Guilds Energy Awareness and Advice Green Deal Advisor Level 5 Diploma in Retrofit Coordination and Risk Management	Coordinators must be a member of a TrustMark-approved Retrofit Coordinator Scheme (e.g. Elmhurst).
Retrofit Assessor	Carry out Dwelling Assessment and supply data to Coordinator	Level 5 Diploma in Retrofit Coordination and Risk Management (Path A) Domestic Energy Assessor (Path B&C) Specialist Level 3 – 6 awards in traditional buildings (Path B and C where building is 'protected')	Certified-DEA by a UKAS-accredited assessor body (e.g. Elmhurst, Stroma etc.). Members of a TrustMark-approved Scheme.
Retrofit Coordinator	Person with overall responsibility for each stage of the project, sometimes also fulfilling specific project roles for which they are also qualified	Open College West Midlands Level 5 Diploma in Retrofit Coordination and Risk Management. Must also be able to demonstrate prior experience and competence in professional practices such as contract management, project management, customer service etc.	Once qualified, must be a member of a TrustMark-approved Retrofit Coordinator Scheme (e.g. Elmhurst).
Retrofit Designer	Person qualified to prepare a retrofit design	Path A: Level 5 Diploma / MCIAT Path B: As above plus registered Architects, Construction Managers and Building Surveyors Path C: as above plus CIBSE members who also hold the Level 5 Diploma or specialist traditional building qualifications	Professional Membership of CIOB, CIAT, CARE, AABC, RIBA RICS or RIAS
Retrofit Installer	Person or organisation undertaking the physical placement of an energy efficiency measure in an existing building	As per PAS 2030 (2019)	As per PAS 2030 (2019). Must be a member of a TrustMark-approved scheme. Current transition period for those operating under PAS2030 (2017) ends on 31st January 2021.
Retrofit Evaluator	Person qualified to monitor and evaluate the effectiveness of a project and provide feedback	Level 5 Diploma in Retrofit Coordination and Risk Management	Once qualified, must be a member of a TrustMark-approved Retrofit Coordinator Scheme (e.g. Elmhurst).

The Process

- Step 1 - Project Inception
- Step 2 - Risk Path Assessment, A,B or C?
- Step 3 - Dwelling Assessment
- Step 4 - Strategy (defining the scope of retrofit works)
- Step 5 - Design
- Step 6 - Installation & Handover
- Step 7 - Monitoring & Evaluation

Risk Path


RISK ASSESSMENT
<< Enter property address >>
Criterion 1: The number of dwellings to be improved
B
1-10
11-30
>30
Criterion 5: Construction and Built Form of buildings
C
conventional, not high rise, not protected
traditional, not protected
system built, not high rise, not protected
high rise, any construction
protected, any construction or built form
Selected
Installer QA or MCS
Internal solid wall insulation
External solid wall insulation
Cavity wall insulation
Party cavity wall insulation
Loft Insulation (between and over ceiling joists)
Loft Insulation (between and under/over rafters)
Room-in-roof insulation
Flat roof insulation
Floor insulation (solid or suspended)
Hot water cylinder insulation
Primary pipework insulation
Draught-proofing and air-tightness
New or replacement windows
New or replacement external doors
Boiler replacement
Boiler repair
New central heating system
Electric storage heater replacement
Electric storage heater repair
Warm air heating
Heating controls
Flue gas heat recovery
Intermittent extract ventilation
Passive stack ventilation
Heat recovery room ventilators
Decentralised mechanical extract ventilation
Centralised mechanical extract ventilation
Mechanical ventilation with heat recovery
Radiator panels
District heating connection
District heating - heat meters
Air-source heat pump
Ground-source heat pump
Biomass boiler
Micro combined heat and power
Solar photovoltaics
Micro windpower
Micro hydropower
Solar water heating
Energy efficient lighting
Energy efficient appliances
Highest inherent techni
Insulation
Draughts
Windows
Boiler
Ventilation
Guidance
Evaluation
Risk
Ventilation Strategy

44	**Renewables**	32	✔	✔	Air-source heat pump	Alan Pither on 4/1/22. There is no conflict	2
45		33	✔	✔	ound-source heat pump	between ASHP,GSHP and ventilation. PAS2035 yet	2
46		34			Biomass boiler	to be revised.	0
47		35			Micro combined heat and power	**KEY**	0
48		36			Solar photovoltaics	two measures don't interact	0
49		37			Micro windpower	need construction detail	0
50		38			Micro hydropower	compatible specification required	0
51		39			Solar thermal	these measures are not compatible	0
52	**Lighting,**	40			Energy efficient lighting		0
53	**appliances**	41			Energy efficient appliances		0
54	**Special**	B.2			Positive input ventilation		0
55	**Cases**	B.2			Radiator Reflector panels		0
56		B.2			Park home insulation		see insulati
57		B.2			Other EEMs including innovations		0
58		B.4			For the installation of external solid wall insulation (EWI), if the construction details in the NIA/INCA/SWIGA guide [10] are not used, or the details coded amber are used (rather than those coded green), the inherent technical risk score for the relevant measure in Table B.2 shall be increased by one.		

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60 B.3 Where a measure complies with the MCS standards, [N7], [N8] and is installed by an MCS certified installer, enter a 1 (a tick)

61 B.2 If the intended Retrofit Installer operates unde Trustmark recognised scheme (see bottom of pag then enter a 1 (a tick) in this column

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64 B **Criterion 2:** Number of measures per dwellin 5

65 B **Criterion 3:** The inherent technical risk of the highest risk measure (from Table B.2). Uses MTIP.

66 B **Criterion 4:** Highest risk from combination of measures

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70 C **Overall Risk Path** Next: Use This Path

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73 ☑ If a path A, still show the Impr Option Evaluation and Med-Term Impr Plan anyway

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IOE

- For medium- and high-risk projects, PAS 2035 requires the Retrofit Coordinator to carry out an improvement option evaluation and review it with the client.
- The improvement option evaluation should form the basis of the a medium-term, whole-house improvement plan, also developed by the Retrofit Coordinator which:
- Establishes the extent of the improvement necessary to reduce emissions in a way that is consistent with national commitments and provides resilience against the effects of climate change.
- Determines the order in which the improvement measures should be implemented for cost effectiveness and to avoid 'blocking' future improvements
- Identifies measures that should be installed together at the same time.

Medium Term Improvement Plan

- A medium term retrofit plan should be produced to guide the process of retrofitting the house in stages, over twenty or thirty years, to achieve appropriate reduction in carbon dioxide emissions and the outcomes agreed with the client.
- This plan identifies the applicable measures in order of priority.
- It also identifies combinations of measures.
- The MTIP preserves opportunities for the future.
- Finally it can be lodged with Trustmark.

Monitoring and Evaluation

Should be carried out regularly during and after the project.

There are three levels of monitoring and evaluation following every project.

- Basic monitoring is usually based on a questionnaire, which is used to collate information from clients or householders about the outcomes of the project and their level of satisfaction.
- Intermediate monitoring includes inspections, recording of internal temperatures and relative humidities, air-tightness testing, fuel use monitoring, and more in-depth interviews than in basic monitoring.
- Advanced monitoring involves the use of a range of more technically sophisticated, complementary techniques and equipment. Monitoring equipment should be scheduled and located on floor plans or three-dimensional drawings, and dates of installation, data downloads and removal should be recorded, together with measurement frequencies. A robust data file naming system is essential to ensure that the provenance of all data is preserved.
- Advanced level of monitoring should be carried out by an independent RC or Evaluator to ensure impartiality.

Any Questions?