# MNZH QA Support Program:
# EWI PIBI Stage QA note

## 1 EWI Steps

This guidance note is part of a series. With one document for each of the following EWI steps. Each doc' provides some key pointers for QA action options, and a checklist, for the specific step. There is also an overall note that looks at all of the steps as a whole. Consortia members could take a QA approach that focusses on one step in depth, or with higher level asks across multiple steps.

- **Retrofit Assessment**
- **Technical Survey**
- **Design**
- **PIBI** This document is for this step.
- **PIBI Check**
- **Retrofit Coordinator Visit** **As the RC visit can be before, during, or after works, the position of the RC visit in this (chronological) list is not set – it could be anywhere in the list.*
- **Installation**

## 2 What is the PIBI (what, where, when, who, how)

- **What:** *Pre-Installation Building Inspection. This is a check by the installer that the design is complete, conforms to PAS2030, does not result in non-compliance with statutory requirements &/or good practice; and can be fulfilled at the specific location.*
- **Where:** *I cannot see anything that specifically mandates that PIBI's must be undertaken at the property. I will ask a PAS2035 committee member about this next time I have the opportunity. My guess is that this is omitted because it was obvious to the authors that a "Building Inspection" would need to be at the building. However, there is significant industry practice whereby PIBI's are not done on-site!*
- **When:** *After the design is completed, after any required remedial works have been completed, and before Installation commences.*
- **Who:** *By the installer, by a 'competent person' – which may only mean that they are 'carded'.*
- **How:** *Should be at the location; with the design in the hands of the inspector; using a good robust checklist; and with knowledge, experience, and understanding. They should ideally also have the Pre-design Building Survey". You can find some examples of PIBI checklists here: https://www.andrewsenv.co.uk/qa-mats-ewi/ . Not all checklists are the same, some are significantly more thorough than others.*

# 3 Five Basic Things

The following are some basic asks that consortium members could raise with their installers. The intention is that these are primary areas for focus that could deliver the maximum impact for the minimum input.

1. **Date and location stamped picture within the PIBI:** *Which will at least encourage that this takes place at the home (rather than a pointless, desk based, tick box exercise). It is quite likely that there will be installer pushback from this request. If that is the case, then this should be a red flag (or at least an amber one), with regard to how robust an installer's processes are to ensure quality. It is possible that installers focus QA effort elsewhere, and it is not impossible to do robust checks for the PIBI content from a desk. But the typical 'green flag' is that EWI PIBI's are done on-site. If PIBI's are not done on-site – then other questions should be asked to understand how (or if) an installer's processes are robust. Probably start with the PIBI Checks step.*
2. **Access to PIBI docs:** *If you at least have guaranteed access to the PIBI's there is the opportunity to access the docs, and at least some deterrent effect for the installer that somebody might look at the docs.*
3. **Evidence of a 'PIBI Check':** *If you at least require access to evidence of an independent PIBI check – that should help to ensure there is one. Not all PIBI Checks are created equal! But ensuring there is one, and having access to it, is a start point at least.*
4. **Roofline extensions, and Roofline Closure Systems:** *The junctions between the walls and roofs are a key risk point, and are one of the risks which can create significant problems if that risk materializes – so higher risk and higher potential consequence. As a minimum, ask your installer to explain to you how their PIBI process looks at these junctions and ensures they are compliant and robust.*
5. **Feedback:** *If the PIBI identifies any issues, questions, or missing information or details – then it is imperative that this goes back to the team (Retrofit Coordinator, Retrofit Designer, etc), so that the design can be amended or added to, in order to provide compliance, completeness, and clarity. Ask your installer how the feedback process works and ask them to talk you through their most recent example. If this isn't really easy – then either they are working with gold standard designers, or the process isn't robust. The latter is more likely.*

# 4 Things to do or ask for

Options listed with the 'lightest touch' first, and more 'pro-active and engaged' later.

- Require that PIBI's have time & date stamped evidence.
- Require that the PIBI documentation is available to you upon request.
- Require PIBI docs to be provided prior to agreeing any EWI works.
- Require the offer of attending PIBI's.
- Actually review PIBI docs.
- Require a specific PIBI Checklist (your specification)
- Require RC attendance at PIBI's. *All or a %. Preferably with their approved RC EWI Visit Checklist.*
- Require funding client (LA or HA) attendance at PIBI's. *All or a %. Preferably with an EWI PIBI Checklist.*
- Train staff in EWI (carding or qualifications) so they can check PIBI's (and Designs) more thoroughly.
- Require additional qualifications for the PIBI inspector.

# 5 CHECKLIST

- **Design:** *Does the person conducting the PIBI have the design in their possession?*
- **Damp, Mould, Condensation:** *Ask the inspector if they have checked for DMC.*
- **Combustion Appliances:** *Ask the inspector if they have checked for combustion appliances and for ventilation provision for them.*
- **Ventilation:** *Ask if the inspector has an adequate ventilation assessment and a compliant ventilation design. Are any 'through wall' details clear – for fans and ventilation.?*
- **DPC:** *Is the inspector happy that the DPC is in place and working? Are there ground level issues? Does the design properly cover the EWI details for DPC and below DPC?*
- **Eaves & Verges:** *Ask the inspector if the design has clear details for eaves and verges, including roofline extensions, &/or Roofline Closure Systems.*
- **Abutments ('roof' to wall junctions):** Ask if there are any abutments (flat roofs, pitched roofs, conservatories, porches, outbuildings, or similar?), and are there clear details for these in the design?
- **Structural Defects, and Wall Condition:** *Are there any structural defects (cracks, subsidence, weak or corroded components)? Is the inspector fully satisfied that the walls are in a condition suitable for EWI? Are any remedial works required before work starts? Are any pull-out tests required.*
- **External 'moisture':** *Have any external moisture issues been resolved (blocked or leaky gutters, overflow pipes, downpipes etc. Evidence of staining or efflorescence.)*
- **Attachments:** *Ask if there are any items attached to the wall? Clear plans for dealing with attached items and clear details for re-attachment?*
- **Services:** *Ask if services are identified and appropriate details provided? Including for meter boxes?*
- **Penetrations:** *Ask if there are clear details for dealing with penetrations?*
- **Moisture and Traditional Buildings:** *Ask the inspector if the design includes the correct materials from those identified in the "pre-design building survey" and that these are correct for the moisture strategy for the building (vapour permeable or not).*
- **Other Design Details:** *Ask the inspector if the design has clearly identified construction details for all headers; jambs; and cills? Are all thermal bridges addressed?*
- **Architectural Features:** *Are these clearly identified, together with a clear plan for the installation?*
- **Get a signature:** *Require the inspector to sign your checklist!*