

## Minutes of the ECO4 Innovation Technical Advisory Panel 6

From: Reuben Privett

Date: 22 November 2023

Time: 09:00 – 12:00

Location: Conference call

A technical advisory panel (TAP) has been set up to review innovation measure applications and make recommendations to Ofgem to approve or reject applications. It is formed by a number of independent panel members, with its Chair and Secretariat function provided by Ofgem. The TAP makes recommendations to Ofgem to approve or reject IM applications. It does not, in and of itself, make any decisions to approve or reject such applications. Accordingly, these minutes provide a summary of each discrete review undertaken by the TAP as discussed by TAP members during group meetings. The TAP review is limited to the material submitted by applicants at application stage, or in subsequent correspondence, and these minutes provide a summary of the opinions offered by TAP members on the material submitted insofar as they inform the eventual recommendation made by the TAP. These minutes are reviewed by the TAP members prior to publication. These minutes do not represent a formal statement of opinion by Ofgem in regard to any product, measure, or application received by Ofgem in relation to ECO. Applicants who wish to challenge the opinions contained within these minutes may contact Ofgem directly.

### 1. Present

Adrian Hull, (Panel Member) THS Inspection Services

Cliff Elwell, (Panel Member) University College London

David Glew, (Panel Member) Leeds Beckett University

Jason Palmer, (Panel Member) Cambridge Energy

Paul Phillips, TrustMark

Kay Popoola, DESNZ

Hunter Danskin, DESNZ

Andy Morrall, Ofgem

Eric Baster, Ofgem

Sidhartha Tibrewal, Ofgem

Reuben Privett (Chair and secretariat), Ofgem

## **2. Introductory remarks by the Chair**

2.1. The Chair welcomed all panel members and attendees to the meeting.

## **3. Innovation Measure Application: Matilda's Blanket IWI**

3.1. The application is for an Internal Wall Insulation (IWI) system primarily for solid wall homes of brick, stone, or concrete construction. It is designed to replace batten and board techniques, and is manufactured offsite. The application is for a substantial innovation measure.

3.2. Previous history related to the application was outlined by the chair, including reference to the previous application considered during TAP 4 and the clarifications requested after rejection.

3.3. No concerns were raised about the comparable measure selected.

3.4. The TAP considered whether each of the clarifications requested had been addressed in the new application.

- 3.5. The TAP was of the view that appropriate evidence had not been provided in relation to the installation of the product in homes with suspended timber floors and intermediate floor voids.
- 3.6. The TAP was of the view that there was not a clear explanation of how an airtight system was maintained in a range of scenarios. The TAP questioned whether tape could be relied on to produce an airtight seal over the lifetime of the system, which is integral to its performance and management of moisture risks. The TAP was of the view that insufficient evidence was provided to demonstrate a comprehensive approach to sealing the system around pipework, electrical sockets, and light switches in particular.
- 3.7. The TAP expressed concerns about the use of a membrane on the cold side of the insulation, and in particular what would happen if warm air entered the system and condensed on to this layer given the system is closed. The TAP was of the view that this may create internal humidity issues in the future should the system be compromised.
- 3.8. The TAP noted that the information provided in relation to thermal bridging related to a property with insulated cavity walls and therefore does not provide evidence to demonstrate that thermal bridging will not occur. The TAP also noted that given the age of the document, some of the standards used are outdated and that the report was focused on meeting Irish Building Regulations. They did not find any merit in the report as evidence. The TAP noted that no thermal bridging calculations had been provided to demonstrate there are no condensation risks associated with the intermediate floor void, or at the junction of a treated wall and a suspended timber floor. No evidence has been provided which demonstrates how the intermediate floor would be treated.
- 3.9. The TAP was not satisfied with the detailing around window reveals. In particular, they noted that where the visible window frame is less than 30mm only plasterboard is used

which would provide a thermal bridge and condensation risk. No calculations have been provided to show that this would not result in a thermal bridge that exceeds the temperature factor threshold of 0.75.

- 3.10. The TAP was of the view that there are areas where the membrane application is not consistent and therefore the ability of the product to achieve a sealed solution was questioned. In particular, the TAP noted that the system relies on sealant at the window reveals to provide an air barrier.
- 3.11. The TAP expressed concern that the application mentions a breathable membrane where the system is designed to be vapour closed.
- 3.12. The TAP was of the view that the product would be unlikely to reduce installation times given the time required to seal the system edges and between junctions of boards.
- 3.13. The TAP queried whether the material used at the edges of the system to cover the insulation material would be Rigidur plasterboard, and whether the seal produced would be durable and airtight.
- 3.14. The TAP was satisfied with the extra detail provided in relation to the survey technique.
- 3.15. The TAP discussed the claim that the product would be more durable than comparable measures due to the increased strength of the board. They agreed that the evidence demonstrated the Rigidur material would have better impact resistance compared to regular plasterboard. However, they were of the view that higher impact resistance is rarely an improvement for IWI systems since IWI is more likely to be impacted by changes to the system such as for new pipework, rather than accidental damage. Given the wiring and pipework run behind this system, additional disruption would be required to

make changes. No evidence was provided which justified why this would be an improvement.

- 3.16. The TAP discussed the claimed improvements in the overall environmental impact of the system. In particular, they noted that the volume of water claimed to be saved is relatively little, and no evidence was provided which demonstrated that the water used in manufacture and installation was less than the comparable measure. They also noted that the finish of the system may still require skimming over given there are areas of beading and potentially tape coming out of the system which would need to be covered.
- 3.17. The TAP discussed the other improvements put forward, including the claimed reduced thickness of the system. The TAP noted that the information provided relates to the system with different airgaps throughout. Detail on the window reveals shows the system with a total depth of 91mm, whereas the BBA specifies the thickness of the system at 106mm and the application refers to the system with a total thickness of 81mm. As such the BBA is not relevant to the system under application.
- 3.18. The TAP would want to see a full hygrothermal analysis of the system with a 15mm airgap to ensure that thermal bridging would not be an issue at this level.
- 3.19. The TAP accepted the u-value calculations for the system with a 15mm airgap.
- 3.20. No Q&A was held for this application.
- 3.21. The TAP recommended that the application should be rejected with feedback, mainly because the risks of unintended consequences outweigh potential benefits.

## **4. Innovation Measure Application: Firetite CWI**

- 4.1. The application is for a limited combustibility class A2 fire rated, mineral-based injection insulation material for cavity walls. The application is for a substantial uplift.
- 4.2. Previous history related to the application was outlined by the chair, including an application assessed during TAP2.
- 4.3. No issues were raised in relation to the installation standards.
- 4.4. The suitability of PU foam as a comparable measure was discussed, with the TAP highlighting a number of reasons it has become less common, including difficulties in securing a guarantee and remediation after the replacement of windows and doors due to the brittle nature of the product.
- 4.5. The TAP noted that the application mentions checking for an active DPC at window and door heads before beginning installation. The TAP was of the view that this may stop the product leaking into gaps but that the method of ensuring this is carried out was not detailed adequately. Additional information should also be provided detailing how service penetrations are surveyed and dealt with.
- 4.6. The TAP was of the view that additional information should be provided detailing remediation where doors and windows were subsequently replaced.
- 4.7. The panel was of the view that a hygrothermal analysis would be required to ensure that moisture risks have been properly considered, and that moisture would not be transferred into the home given the high moisture content in the product when first installed. These tests should occur in homes where the weather conditions are representative of the UK.

- 4.8. The TAP noted the extended drying period and queried whether the product would be installed year-round, given this may not allow the product to dry out properly.
- 4.9. The TAP was of the view that the evidence provided which demonstrated shortcomings in the comparable measure were often in instances where the structure of the building was already compromised. An assessment on these claims could not be made given the comparisons were often against an imperfect installation of the comparable measures. However, the TAP accepted that sagging can be an issue in mineral wool CWI.
- 4.10. The TAP discussed the claims in relation to increased annual cost savings. They noted that airtightness may lead to increased performance, but in reality, the cavity is not part of the air barrier. Furthermore, while the airtightness of the walls may be improved, much of the air leakage will occur through the floor and roof, meaning only a marginal improvement of airtightness of the building. Additional evidence of the increased performance and actual cost savings in practice would strengthen these claims, as well as evidence that the comparable measures have lower performance.
- 4.11. The TAP discussed the increased durability claims and was of the view that the drilling pattern employed is appropriate to the product in question. Likewise, the drilling patterns of the comparable measures are suitable and as such there is not an inherent benefit.
- 4.12. The TAP was of the view that additional evidence which showed gaps are produced in the comparable measure and are not produced when installing this measure would strengthen the application.
- 4.13. The TAP discussed the environmental improvement claims. They noted that the scoring methodology for BREEAM updated in 2022 which means that the evidence provided makes assessing the level of improvement over the comparable measure impossible. The TAP was of the view that the EMICODE provided did demonstrate a marginal improvement in

air quality, although air quality was not considered to be a substantial issue with existing CWI products.

4.14. The TAP noted that the claim that the product could be mixed with construction waste was a slight improvement over the comparable measure.

4.15. The TAP was concerned that no evidence is provided for LCAs of the comparable measures, which makes assessment of the improvement impossible. The TAP was of the view that LCA evidence is available which would allow for comparison between this product and the comparable measures.

4.16. The TAP recommended that the product may be eligible for a standard uplift subject to clarifications.

## **5. Innovation Measure Application: DuraShield EWI**

5.1. A representative from DuraShield answered questions relating to an application from TAP 5 after demonstrating additional functionality required for an uplift to be recommended.

5.2. In the Q&A, the TAP questioned the gateway approval process for each stage of the installation. They asked whether there is a trail of timestamped evidence which demonstrates that photos are provided and approved before the next stage begins. The representative noted that this information is captured on the backend and will be added to the front end too. They also explained that there are 24-hour time limits set of technical operatives to approve stages so that installation is not held up on site.

5.3. In the Q&A, the TAP asked whether there was a clear notification which indicates to on-site operatives that they should not continue with the next stage of installation. The representative gave an overview of the process involved.



5.4. The TAP was of the view that a more obvious indication or notification should be provided to operatives to ensure that they do not move on to the next stage.

5.5. In the Q&A, the TAP asked what the homeowner sees when they scan the QR code. The representative explained that after the warranty is produced, the QR code will be generated, and all of the relevant information will be added to the website for the homeowner to see.

5.6. In the Q&A, the TAP asked for assurance that the system was GDPR compliant.

5.7. The TAP was satisfied that the clarifications previously requested have been addressed.

## **6. AOBs**

6.1. The TAP noted that measures in ECO must be installed in accordance with PAS2035, which includes provision for risk management. Where measures under application are seen to not conform with these provisions, the TAP would be inclined to reject them.

6.2. A panel member raised an application from a previous TAP round and received an update from DESNZ colleagues.

## **7. Date of next meeting**

7.1. The next meeting of the TAP is scheduled for 14 February 2024. Upcoming TAP meetings for 2024 have been published on our [website](#).