

Phase I of the Green Heritage Homes is a partnership project, managed by Bath & West Community Energy and funded by the South West Net Zero Hub, which is hosted by the West of England Mayoral Combined Authority through the Local Energy Advice Demonstrator Programme.

Local Energy Advice Demonstrator (LEAD) Project: Green Heritage Homes

Level 0 Pre-App Phase I Case Studies: 2024- 2025

Case Study Seven: Secondary glazing, slim-profile double glazing, vacuum glazing

**All Level 0 pre-app case studies have been anonymised in accordance with GDPR requirements*

History and building type

Building age: Late 17th century

Building type: Detached mixed use (dwelling and B&B)

Grade listing: Grade II*

Wall construction type: Dressed sandstone to front, coursed rubble to rear

Existing retrofit measures: Some windows replaced with slim-profile double glazing

Previous Applications for Listed Building Consent (LBC): None

Proposals & Matters Discussed:

- Upgrades to existing single glazed windows throughout with secondary glazing or slim-profile double glazing/vacuum glazing.

Heritage Assessment:

- Replacement of existing sash windows may be acceptable where they appear to be later, non-historic additions – windows are multi-pane sashes with anachronistic sash horns to top and bottom sashes.
- Casement windows could not be upgraded without significant material intervention.
- Secondary glazing may be appropriate, but further assessment would be required as to how this would be effectively installed within stone mullion openings.

Possible Retrofit Options:

- Replacement of timber sash windows with slim-profile double glazing or vacuum glazing.
- Options for secondary glazing to metal-framed casement windows, pending design of proposed system – e.g. magnetic strip secondary glazing.

Listed Building Consent:

- Upgrades to replace existing windows with more energy efficient glazing would require listed building consent.
- Secondary glazing may require listed building consent, to assess how the proposed units would be installed within the stone mullion openings and intersect with existing windows and stanchions.

Measures Discounted:

- Options were discussed for the replacement of casement windows with more energy efficient glazing. There is evidence existing single pane casements were later replacements (possibly 20th century), superseding earlier leaded windows – in this context, there may be justification for replacement. However, there would be significant concerns regarding how any new casements would be installed without adverse impact to the appearance or structural integrity of the

stonework, or the supporting metal stanchions. Removal of the stanchions would not be supported where this has already resulted in cracking to stonework elsewhere in the building.

- The casement windows at ground floor were agreed to not be suitable for secondary glazing where installation would impact the use of the shutters.

What Next?

- Existing metal windows appear to be 20th century additions, replacing earlier leaded casements. Windows would not be able to be replaced without removing the metal stanchions embedded in the stone mullions, resulting in harm to historic fabric and potential structural damage. Existing examples of double glazing have already resulted in harm. Further advice would need to be sought from a specialist conservator as to how windows could be upgraded whilst minimising harm.
- The applicant expressed interest in further investigation into the installation of solar panels on the area of flat roof behind the parapet, to the rear of the building. A separate pre-app in the future was recommended for assessment of proposals.