

RISE

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Green Heritage Homes Project - Bath and North East Somerset

Case study

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Summary

Green Heritage Homes is a partnership project, managed by Bath & West Community Energy and funded by the South West Net Zero Hub. It is hosted by the West of England Combined Authority through the Local Energy Advice Demonstrator (LEAD) Programme. The Green Heritage Homes project works with the local authority and other local organisations and charities to provide retrofit and conservation advice, including Bath and North East Somerset (B&NES) Council, Bath Preservation Trust, Centre for Sustainable Energy (CSE), People Powered Retrofit, and the South West Net Zero Hub.

This case study document highlights the services specifically provided by B&NES Council as part of the project, which help owner-occupiers of listed buildings make them more energy efficient and guide potential applicants through the listed building consent process.

Who is B&NES?

B&NES Council is the local authority for the city of Bath, and the area of North East Somerset. Bath is a double-inscribed world heritage site, and also has a city-wide conservation area. There is estimated to be 5,000 listed buildings in Bath, but the number is likely a lot higher where many listed building entries affect terraces of multiple properties, like the Grade I Lansdown Crescent example in figure 1 below.



Figure 1: The list entry for Grade I 1-20 Lansdown Crescent in Bath covers 20 terraced houses. Source: Historic England (<https://historicengland.org.uk/listing/the-list/list-entry/139410>).

All listed buildings have additional planning restrictions to protect their architectural and historical significance (see the RISE Heritage Planning Toolkit for more information). The need to apply for listed building consent has the impact of discouraging listed building owner-occupiers from making their properties more energy efficient. B&NES Council recognised that this hesitation was often due to a common misconception that it was impossible to get consent for retrofit works in listed buildings. This was the basis for the Green Heritage Homes Project.

Green Heritage Homes Project

In 2023, Bath and West Community Energy (BWCE) was awarded £344,380 from the Department for Energy Security and Net Zero (DESNZ) for the project, as one of 36 LEAD projects to be trialled nationally. The project aims to increase the rate of sensitive retrofitting in historic buildings by increasing knowledge and confidence among householders and professionals. By promoting retrofit that saves energy, improves thermal efficiency, responds to the technical needs of the building, and conserves the significance of designated heritage assets, the project helps those living in listed buildings to take retrofit action. It does this by offering two innovative services.

As part of the project, B&NES Council has worked to deliver new services targeted at encouraging the sensitive retrofit of listed buildings by creating a new pre-app service and creating case studies with local owner-occupiers.

New services

Service Level 0 Pre-Application

As a planning authority, B&NES Council already offers several paid for pre-application services to those considering a development that will require listed building consent and/or planning permission. The service level and cost of the advice depends on the scale of the development. At the time of writing, B&NES Council's pre-application service level 1, which could provide advice about a home extension, would cost £148 (with a further £69 for a meeting with an officer).

The Green Heritage Homes Project funding allowed B&NES Council to introduce a service level 0, aimed specifically at owner-occupiers of listed buildings within the local authority boundaries. The service is intended to discuss options for energy efficiency improvements where the owner-occupier is at the very early stages of a project and wants to know more about what options are available. A fee of £69 means a local authority conservation officer will visit the site and provide tailored technical and conservation advice based on the property and the suitability of measures discussed, as well as any other factors such as budget.

The service level 0 pre-application is suitable for discussing the following retrofit measures in listed buildings:

- Energy saving 'quick wins' to save energy and water which may not require listed building consent
- Draughtproofing
- Secondary glazing and/or slim-profile double glazing
- Internal wall, loft, and/or floor insulation
- External wall insulation

- Upgrading of existing heating and hot water systems
- Heat pumps
- Solar panels

Listed Building Energy Champion service

This service provides technical retrofit advice from BWCE, alongside advice from the local authority conservation officer, to owner-occupiers of listed buildings at a subsidised rate, in exchange for becoming a case study. This service involves an in-person visit from an expert BWCE energy assessor and a B&NES conservation officer. During the visit, an assessment of the building, its current energy performance, and its heritage significance is made, so that this can inform the packages of retrofit measures suggested.

After the visit, the energy assessor can model retrofit options that should not harm to the building's significance. A report based on the findings of the energy modelling is then shared with the owner-occupier, setting out different scenarios they could take forward based on factors such as the intensity of building works or budget. Although the scenarios vary according to the building's significance and the recipients' circumstances, the scenarios are generally broken down as follows:

1. Light touch measures: e.g., secondary glazing, draughtproofing, loft insulation, ventilation improvements
2. Further measures: e.g., double glazing, internal wall insulation (IWI), floor insulation
3. Renewables: where considered feasible, these are modelled in combination with light touch measures or further measures to achieve further energy savings and reduction in carbon emissions

Those that opt to use this enhanced service are asked to act as 'listed building energy champions', which means the Green Heritage Homes team can share learning from the owner-occupier's experience. B&NES have had to amend some of their normal pre-application advice services to enable this, ensuring that they get consent for information and data sharing.

B&NES successes

The project officially launched in August 2023. Services for listed building champions and the level 0 pre-application were opened for submissions in February 2024. These services have been provided to a total of 25 listed building owner-occupiers. The team has received positive feedback about the services, especially in relation to the surprising variety of retrofit options available to increase buildings' energy efficiency. There has also been an increase in listed building consent applications being submitted by those who engaged with the service at an early stage, showing that surveys have helped encourage owner-occupiers to pursue works to make their buildings more efficient.

Alongside the advice given through the level 0 pre-application and listed building champions services, the project has hosted and spoken at a number of well attended events and webinars. These have promoted the efforts of the project and helped upskill the knowledge of listed building owner-occupiers, landlords, and heritage professionals. There have also been active discussions on issues surrounding retrofitting listed buildings with in-person homeowner surgeries.

An example of B&NES service and results

Of the 25 surveys completed, 60% of properties assessed were either mid- or end of terrace, typical of Bath's built typology. Applicants are predominantly owner-occupiers at 76%, but the service has also been able to reach private landlords and business owners. Of particular interest is that 75% of listed building champions have already done some form of work to improve energy efficiency, whether installing secondary glazing or internal wall insulation, and almost all properties have some form of loft insulation installed.

Two examples of completed surveys for listed building champions have demonstrated what retrofit measures might be considered:

Grade II Terrace, Bailbrook Lane

A two-storey home in north Bath, this Grade II building dates to the early 19th century and forms part of a wider terrace which is very similar in appearance. On the site visit, we identified that the building had evidence of later alterations, such as the replacement of the rear windows and addition of a rear dormer window. The front windows, whilst traditional multi-pane sashes, were installed in the 1970s. The interior had changed with the addition of a modern kitchen and drylining of some of the walls.



Opportunities were identified for measures such as draughtproofing, replacement slim-profile double glazed sash windows, and upgrades to loft insulation. Internal wall insulation could be applied to the rear wall, and underfloor insulation could be installed under the modern floor finish. An air source heat pump was considered, as well as the possibility of ground-mounted solar panels. The energy modelling suggests that a combination of these measures could achieve a 45% reduction in heating demand!

Grade II Terrace, Sydney Buildings

This four-storey terrace building is Grade II and dates to the mid to late 19th century. It is visually sensitive where the rear elevation is visible from the Kennet & Avon Canal. The building is well preserved and has retained its original windows and interiors, including decorative corncicing, ceiling rosettes, and plasterwork. The lower ground floor has been subject to later alterations, such as cement tanking and installation of a concrete slab floor.

The range of measures we could recommend was restricted due to the sensitivity of the building. However, we were able to suggest more discreet interventions such as installing secondary glazing, draughtproofing windows, doors, and fireplaces. Internal wall insulation and floor insulation could be fitted at lower ground floor level, and non-historic sash windows in the dormers could be replaced with slim-profile double glazing. Measures included an air source heat pump in the garden. Despite being a lighter touch scheme, the energy modelling suggests that these works could reduce heating demand by 20%!



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