

## HE response to [Energy Company Obligation 4 and the Great British Insulation Scheme: mid-scheme changes consultation](#)

### **Question 1 – Do you agree that a household should be able to receive both loft and cavity wall insulation under GBIS?**

Historic England's position is that while both loft insulation and cavity wall insulation have their merits, they can also cause problems in a building if they are installed without due consideration for the context and characteristics of that structure. When a household can receive both loft and cavity wall insulation under GBIS, this should only be undertaken and approved by a competent professional who is able to confirm that thermal bridging will not be created or exacerbated, and that ventilation and moisture pathways will not be impacted. We recommend following a whole building approach.

Loft and cavity wall insulation can have advantages and disadvantages in a historic property or a building of traditional construction. Loft insulation, when specified and installed appropriately, is a relatively easy way to improve a building's thermal performance, provided that the solution does not increase the risk of condensation in the loft area, for instance by removing or reducing ventilation provision. In addition, consideration of fire risk from electrical and mechanical systems (such as wiring and downlights) is needed.

Cavity wall insulation is never 'low risk', as demonstrated by previous unsuccessful installations. The main risk is bridging the cavity and creating moisture pathways between the outer and inner wall leaves, particularly in areas exposed to high levels of wind-driven rain.<sup>1</sup> This risk is heightened in historic/traditionally constructed buildings because their cavities generally consist of an early and narrow type. As such, these walls should always be treated as solid walls for options appraisal and risk assessment.<sup>2</sup>

When considering either loft or cavity wall insulation, as with any insulation proposal, there is also a risk of using materials that are not compatible with traditionally constructed buildings. Spraying adhesive foam insulation, particularly to the underside of the roof

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<sup>1</sup> BRE, Good Building Guide 44, 2001, [Insulating masonry cavity walls: part two – principal risks and guidance](#).

<sup>2</sup> Historic England, 2016, [Energy Efficiency and Historic Buildings: Insulating Early Cavity Walls](#).

covering, is not appropriate in any case as this is likely to harm the fabric of the building and is not easily removed.<sup>3</sup>

In summary, Historic England advises caution and the use of the whole building approach when deciding if any building, of traditional construction or otherwise, is suitable for insulation – failure to do so creates the risk of maladaptation.<sup>4</sup> Poor retrofit outcomes are expensive to rectify and can have negative impacts on the wellbeing of building occupants. This must be avoided through careful planning and consideration.

**Question 3 – Do you agree that smart thermostats should be an eligible secondary measure for owner-occupied households in the low-income group?**

Historic England agrees with the introduction of heating controls as a secondary measure to support households to properly control their heat and to reduce household greenhouse gas emissions.

Furthermore, Historic England believes that heating controls should be considered as a primary measure, and that serious consideration needs to be given to the benefits they offer versus the relatively small expenditure needed to install them. Failure to include these controls could mean that the occupier ends up with a heating system they cannot sufficiently control to meet their comfort requirements and that would enable them to save energy and money. At the least, heating control installation should be a mandatory requirement in association with any other measures implemented in a household.

**Question 12 – We are not considering utilising TMLP for ECO4 at this time. Do you agree with our approach?**

Historic England agrees with the outlined approach.

**Question 14 – For the adapted version of TMLP, have sufficient risks been identified and addressed in Table 1?**

Historic England would like to raise the following points in relation to Table 1:

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<sup>3</sup> RICS, 2023, [Spray foam insulation – a clear, impartial guide](#).

<sup>4</sup> Historic England, 2024, [Energy Efficiency and Retrofit in Historic Buildings: Whole Building Approach for Historic Buildings](#).

Line 1 – Historic England is concerned by the term ‘heritage properties’, which lacks a consistent definition in the consultation document. It is unclear whether this term refers to a designated heritage asset and/or a building of traditional materials and construction. Historic England recommends that ‘traditional buildings’ and ‘heritage properties’ are clearly defined within this document should these changes go forward.

Line 2 – This line does not make any reference to the requirement of understanding the impact of installing loft insulation, particularly in relation to fire risks from mechanical and electrical equipment overheating. Further support and information on the consequences of fire occurring via inaccurately installed loft insulation should be sought from CIBSE or the IFE.

Line 3 – Historic England supports the intention for improvement of quality assurance across retrofit projects. However, under PAS2030/2035 a Retrofit Assessor will not assess the installation or have any control over the installer’s competency, surveillance, or quality assurance. If PAS is used to cover this function, it would be a task and liability more reasonably put upon the Retrofit Coordinator. The additional mechanism for this would need consideration and clarification, as would any associated pathways for compliance claims, liability, and remedy. This would require extra capacity in the industry and time within the PAS process. Unless Trustmark can expand capacity within its inspectors, not every measure could be independently surveyed to ensure it has been correctly installed. In line with the imminent release of BS40104, it is recommended that ECO4 and GBIS refer to those undertaking a ‘retrofit assessment’ and not the position of ‘retrofit assessor’ as adopted by PAS. This will ensure that all works follow best practice with correctly identified competent persons.

Line 4 – When considering historic properties and buildings of traditional construction, an Energy Performance Report does not currently have adequate mechanisms and quality assurances to ensure basic recommendations are suitable for their property and its context. In addition, where basic recommendations are provided and the homeowner does not commission a competent person to follow up, there is risk that conflicting energy efficiency measures will be installed. Short- and medium-term plans can, when aligned with a whole building approach, produce much benefit and cost-effectiveness by providing more specific and considered recommendations and a robust phased plan by which to implement them. This can help to avoid abortive works being undertaken and mitigate against unintended consequences and maladaptation.

**Question 17 – Are there any other changes, not proposed in this consultation, that you believe would increase levels of delivery under GBIS?**

Historic England would like to highlight the potential risk of accelerated levels of delivery. While the drive to ensure GBIS meets its target of delivering £1 billion of measures is significant, this drive must be balanced against the risk of rushed work leading to the installation of inappropriate loft or cavity wall insulation. If buildings are not considered carefully in their own context, and their assessments are rushed, the risk of maladaptation increases, which could cause negative impacts on buildings and the wellbeing of their occupants.

Historic England is particularly concerned about the impact on buildings of traditional construction because the details and recommended materials outlined in building regulation-approved documents are more suited for modern construction types. Although much work has been undertaken to understand what materials are appropriate for existing buildings, the outcome of research by MHCLG (2019) and DESNZ (2024) have still identified moisture risks.<sup>56</sup> The ensuing problems can be harmful for building occupants and expensive to rectify, as evidenced by the Preston scheme and more recently in Wales.<sup>7</sup> We would therefore like to emphasise the importance of careful consideration and the whole building approach when assessing the suitability of insulation measures in a building, whether of traditional construction or otherwise.

**Question 21 – What do you think the minimum certification requirements for low carbon heating and microgeneration installations should be under ECO4?**

The Microgeneration Certification Scheme (MCS) covers a wide variety of parameters that need to be considered when low carbon heat installations and microgeneration installations are proposed. Historic England is aware of cases where the MCS has oversized plant and heating emitters being proposed. With existing buildings, the risk of oversizing increases when poor assumptions are made about the air tightness and U-values of the fabric. One of the practical challenges is providing a certification scheme that can be utilised at scale. Rather than advise on minimum certification requirements, we would like to see further development of the existing MCS to enable more accurate plant and heating emitter selection.

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<sup>5</sup> Ministry of Housing, Communities & Local Government, 2019, [Research into resistance to moisture in buildings: research summary](#).

<sup>6</sup> Department of Energy Security and Net Zero, 2024, [Demonstration of Energy Efficiency Potential \(DEEP\)](#).

<sup>7</sup> Historic England, 2024, [Introduction to Retrofitting: When Retrofit Goes Wrong](#).

**Question 23 – Do you agree with our proposal to allow individuals with at least a Level 2 Technical and Vocational Qualification, or equivalent, to undertake a report substantiating the need for extraction of cavity wall or loft insulation for the purposes of determining building fabric repair expenditure?**

Historic England would like to underline that any planned interventions need to be considered holistically, taking into account their effect on the building fabric, its services, and its occupants. It is not clear that individuals with a Level 2 qualification would have the sufficient understanding of a whole building approach to undertake a report of this nature, particularly in the case of a historic building or a building of traditional construction. Chartered building surveyors are subject to assessment of their professional competency and are required to complete a minimum of 20 hours annually of CPD (continuing professional development). Requiring only a Level 2 qualification would impact both consumer protection and confidence.

**Question 24 – Are there any specific Level 2 Technical and Vocational Qualification qualifications, or equivalent, which would be most appropriate for those conducting this report?**

Historic England is not aware of any Level 2 qualification that would be appropriate for those conducting this report for a historic building or a building of traditional construction, to ensure that the level of knowledge and competence can be evidenced. Rather, we would recommend that, as under PAS2035:2023, those undertaking design and specification roles on these properties should, as a minimum, complete the Level 3 Award in Energy Efficiency Measures for Older and Traditional Buildings, if they are not able to demonstrate the appropriate competence and experience via a recognised building conservation accreditation scheme (such as AABC, CIAT, CIOB, RIBA, and RICS).

**Question 25 – Do you think a Chartered Surveyor continues to be suitably equipped to conduct this assessment?**

Chartered Building Surveyors are adequately equipped to conduct Building Fabric Repair (BFR) assessments. The crucial consideration is that a Chartered Surveyor is from a buildings background, and thus either a Chartered Building Surveyor or Chartered Building Control Officer. The term Chartered Surveyor can refer to Land, Valuation, Quantity Surveyors etc. Architects and Chartered Architectural Technologists would also have the competencies to carry out this type of assessment.

**Question 26 – Do you agree with amending the purpose of the assessment under article 62(2)(d)(i) of the ECO4 Order from; “identifying potential efficiency measures for**

**improving the energy efficiency of the premises”, to; “assessing the condition of the insulation and related building fabric”, to more accurately reflect the role undertaken by the assessor?**

Historic England does not find the proposed amendment to article 62(2)(d)(i) to be clear in its intended meaning and we suggest it be changed to the following: “assessing the condition of the building fabric and any existing energy efficiency measures, and identifying repair needs to facilitate appropriate and robust energy efficiency improvements”.

**Question 69 – Do you agree with our preference to require GBIS retrofits to include only one of CWI, SWI, RIRI, FRI or PRI? If not, why not?**

Historic England does not agree with the preference to require GBIS retrofits to include only one insulation measure. To minimise moisture risk and thermal bridging, and to maximise thermal continuity and efficiency gain, a building may require more than one of these types of 'single measures' to be applied. Moreover, all the 'single measures' outlined in GBIS are high-risk measures. It is our opinion that single measures should not be undertaken within any scheme or grant funding without first undertaking a whole building assessment, robust cost-benefit and risk analysis, and obtaining evidence that the proposals will not cause harm to occupants or the building fabric.<sup>8</sup> When a whole building approach is not undertaken and the moisture dynamics and risk of the building are not understood, any of these measures has the potential to cause unintended consequences, resulting in abortive works, risks to the occupants' health, and risk to the building. This is of particular importance when historic buildings and buildings of traditional construction are subject to works.<sup>9</sup>

**Question 70 – Do you agree with our preference to require ECO4 retrofits to include at least one of CWI, SWI, RIRI, FRI and PRI? If not, why not?**

Historic England does not agree with the preference to require ECO4 retrofits to include at least one insulation measure because in some cases these types of single measure might not be appropriate for a building or its context (fabric type, detailing, exposure etc). The decision to undertake any measure should be informed by a whole building approach and retrofit plan which includes a robust cost-benefit and risk analysis. This is of particular importance when historic buildings and buildings of traditional construction are subject to works.

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<sup>8</sup> Historic England, 2024, [Energy Efficiency and Retrofit in Historic Buildings: Whole Building Approach for Historic Buildings](#).

<sup>9</sup> Historic England, 2024, [Energy Efficiency and Retrofit in Historic Buildings: Traditional Buildings and Energy Efficiency](#).

Historic England is concerned in principle about the move away from a whole building approach throughout these mid-term changes. These proposals, while currently limited, could set a dangerous precedent. It would be most beneficial to increase skills and competencies in the sector to increase volumes, rather than lowering standards. For any energy efficiency measures to perform adequately, a building must be in a good state of repair and have continuous maintenance. Where this is not the case, then building defects will likely result in moisture accumulation and failure of the energy efficiency measure.

**Question 71 – Do you think we should allow eligible heating measures to be delivered in ECO4 and GBIS PFP? If not, why not?**

Historic England is concerned that permitting eligible heating measures to be delivered in ECO4 and GBIS PFP would likely discourage decarbonisation of the heating system. 'Broken heating systems' are an ideal opportunity to reduce the carbon emissions associated with the heating system. Good maintenance and understanding the expected lifespan of a heating system can allow heating decarbonisation projects to be planned and budgeted for.

**Question 72 – Do you agree with our proposal to allow repair and like-for-like replacement of efficient, broken boilers and ESHs in ECO4 PFP? If not, why not?**

Historic England disagrees with the proposal to allow repair and like-for-like replacement of efficient, broken boilers, and ESHs in ECO4 PFP. Our concern here is again the discouragement of decarbonising the heating system. This is due to 'broken heating systems' being an ideal opportunity to reduce the carbon emissions associated with the heating system. Good maintenance and understanding the expected lifespan of a heating system can allow heating decarbonisation projects to be planned and budgeted for.

**Question 77 – Do you agree with our preference to require heat metering and electricity sub-metering in those circumstances outlined above?**

Historic England agrees with the preference to require heat metering and electricity sub-metering in the described circumstances. We can understand how the data from this metering would benefit the wider understanding of how the building is performing. To avoid this requirement being prohibitive to applicants, we would recommend that support for this metering is eligible as part of the scheme's funding.

**Question 78 – Do you agree with our proposed approach to complementary insulation work?**

Historic England agrees with the premise of the proposed approach to complementary insulation work, but the details require further consideration and qualification, particularly the exact nature, type, and suitable materials of such 'complementary works'. This is of particular importance when historic buildings and buildings of traditional construction are subject to works.

When the installer is experienced in correctly specifying materials that are appropriate and compatible with the existing building materials and services, and therefore will not cause harm, then rectifying holes, gaps, and defects is beneficial to reducing infiltration losses or thermal bypass. However, most installers for loft and cavity wall insulation will likely not meet this criterion for historic buildings and buildings of traditional construction. It would be prudent to highlight any possible 'complementary insulation works' during the retrofit assessment for due consideration during design stages, or to enable the occupant or homeowner to ensure they engage a designer or installer with the relevant skills and knowledge to ensure that such issues are rectified appropriately.