

**Center for Bygningsbevaring**

**Mapping of knowledge, issues and projects in relation to energy improvements in European listed buildings and buildings worthy of preservation**

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Climate changes and reliability of supply are at the centre of many political initiatives these years, including more stringent energy efficiency requirements.

The Danish Cultural Heritage Agency wishes to contribute to developing methods that can improve energy efficiency in historical buildings while respecting their historical qualities.

The Agency has therefore initiated a survey of experience with and knowledge of energy improvements in European buildings protected by law due to their historical or architectural qualities.

The purpose of the survey is to gain an overview of practice and experience in relation to energy improvements in the light of the enhanced energy saving requirements resulting from climate change. Through the exchange of experience, the Agency hopes to map existing knowledge and disclose the need for further pilot projects and research, as well as dissemination of existing knowledge. The survey will thus provide the basis for concrete cooperation projects.

The Agency hopes that many countries will participate and share their experience in this area via the questionnaire.

The results will be communicated in English to the Agency's European cooperation partners.

The Centre for Building Preservation in RAADVAD will carry out the survey on behalf of the Cultural Heritage Agency, in cooperation with the Technical University of Denmark BYG.DTU, among others.

The questionnaire can also be completed electronically at:

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For further information, please contact:

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**1 Has your organisation launched any special initiatives to reduce energy consumption in listed buildings?**

Yes/No:

If yes, which:

If no:

Not relevant:

Not a priority:

Relevant, but resources are insufficient:

**2 Have you set targets and prepared action plans in this area?**

No:

Yes, targets:

Yes, action plans:

Yes, both:

**3 Have you launched initiatives to reduce energy consumption in buildings that you own?**

Yes/No:

If yes, which:

**Experience and projects in countries with energy improvements in listed buildings and buildings worthy of preservation**



**4 Are the energy requirements the same for:**

**A. Energy improvements in listed buildings and buildings worthy of preservation compared to new buildings?**

Yes/No:

**B. Energy improvements in old/existing buildings compared to new buildings?**

Yes/No:

Further comments/links/references:

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**5 In terms of energy requirements, etc., does building legislation provide exemptions for listed buildings and buildings worthy of preservation?**

Yes/No:

Further comments/links/references:

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**6 Does building legislation include special provisions on energy requirements in relation to the following:**

Energy requirements

Energy requirements	Energy improvement measures in listed buildings	Energy improvement measures in old buildings	Energy requirements for new buildings
Roof			
Outer walls			
Windows			
Doors			
Ground deck			

Further comments/links/references:

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**7 Are listed buildings subject to special regulatory requirements in terms of accounting for:**

**Total energy performance** (calculation of the total energy loss from a building, taking into account e.g. free solar heating through the windows)

Yes/No:

**Life cycle analysis (ecopoints)** (the total environmental impact, e.g. from production, operations and decomposition)

Yes/No:

**CO<sub>2</sub> accounting** (assessing the total CO<sub>2</sub> emissions on the basis of the energy performance and the life cycle analysis)

Yes/No:

**Indoor climate**

Yes/No:

Further comments/links/references:

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**8 Had the debate on climate change led to a change of practice in relation to energy savings in listed buildings and buildings worthy of preservation?**

Yes/No:

Links, addresses or contacts concerning the above

Further comments/links/references:

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**9 What are the specific development requirements in relation to energy savings?**

Models for calculation of total energy loss

Life cycle analysis calculations

Examples of concrete solutions

Cooperation and networking on knowledge-sharing in this area

Research and pilot projects

Compilation and dissemination of known research and pilot results



**8 Are new tools needed for assessing potential energy savings in relation to preservation interests?**

Yes/No:

Links, addresses or contacts concerning the above

Further comments/links/references:

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**9 Is there an increased need for new research into achieving substantial energy savings without compromising fundamental preservation interests?**

Yes/No:

Links, addresses or contacts concerning the above

Further comments/links/references:

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**SPECIFIC QUESTIONS concerning reinsulation of old buildings**

To give us an overview of the existing knowledge, please inform us of the exchange and documentation of new materials and methods for energy improvements and re-insulation of old houses taking place within the following areas:

**Roof**

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional roofing materials and solutions:

New materials and solutions:

Further comments/links/references:

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**Outer walls**

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional materials and solutions:

New materials and solutions:

Further comments/links/references:

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**Windows, including double glazing**

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional materials and solutions:

New materials and solutions:

Further comments/links/references:

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**Doors**

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional materials and solutions:

New materials and solutions:

Further comments/links/references:

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**Ground deck**

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional materials and solutions:

New materials and solutions:

Further comments/links/references:

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**Heating methods**

Experience, pilot projects, research in relation to energy improvements to:

Traditional methods and solutions:

New methods and solutions:

Further comments/links/references:

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## Ventilation

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional methods and solutions:

New methods and solutions:

Further comments/links/references:

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## Cooling

Projects, pilot projects, research and experience in relation to energy improvements to:

Traditional methods and solutions:

New methods and solutions:

Further comments/links/references:

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Respondent:

Country:

www.

## Background information

Name of organisation

Address:

Street:

Town:

Postcode:

Country:

Contact:

Job title:

Tel.:

E-mail: