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Guide to Insulation

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think



Installing insulation above their ceiling was a key component of Evesham Methodist Church's improvements to their building. They chose to build in good environmental criteria as part of a phased redevelopment of their church premises.

Phase one included digging into their basement with volunteer labour. They shifted more than 400 cubic metres of soil, concrete and rubble to create additional space – and used the materials to form the basis of a new terrace alongside the river.

The space was then insulated with cavity block walls in addition to the 0.5m thick external walls. Double-glazed doors and windows were fitted. The structure includes a new kitchen, toilets including facilities for disabled, a quiet room, resources room and two halls.

Phase two, aiming to refurbish the main church building, started after additional funds had been raised. The ceiling was insulated along with a ceiling dome to allow more natural light into the welcome area.

do



Draught-proofing sounds a simple thing to do

It was actually a major part of redevelopment work at the Dorking Society of Friends Meeting. And they became the first Quaker Meeting to receive the former Eco-congregation award, the scheme now replaced by Eco Church.

To reduce their CO2 emissions by draught reduction, they had their sash windows professionally refurbished and draught-proofed, some with the help of a grant from an environmental trust.

They saw the work as a demonstration that love of God's creation should be taken seriously. 'By making changes in the way we live, we can help to preserve the beauty and variety of the world we live in, prevent pollution, reduce injustice, and indirectly, help to prevent conflict,' said Anne Brewer, one of the members.

Follow their lead and invest in some small-scale draught-proofing. See what a difference it can make.

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DORKING SOCIETY OF FRIENDS
www.dorking.quaker.eu.org/activities.php



Create a checklist for insulating your church

There are three main areas to consider when planning to insulate your church. These are outlined by buildingconservation.com and the Church of England's Shrinking The Footprint. The guidelines for your checklist are:

- hot water pipes, valves and joints. Insulating pipes can reduce heat energy loss from the pipe by 70 per cent;
- roofs, walls or floors. Insulating the 'envelope' of a building can reduce heat energy loss by 70 per cent;
- glazing. While double glazing or secondary glazing are not appropriate for most historic buildings, the use of insulated blinders and shutters, and draught proofing can be considered.

English Heritage also offer guidelines on insulating older properties. A weblink is provided here for their advice.

Decide on which insulation needs to go where

Loft insulation, floor insulation, window insulation – what on earth do you use that's good for the environment? A simple guide to eco-friendly insulation is offered by the Green Building Store.

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BUILDING CONSERVATION

www.buildingconservation.com/articles/footprint/carbon_footprint.htm

HISTORIC ENGLAND

historicengland.org.uk/advice/your-home/saving-energy/older-houses/insulation

GREEN BUILDING STORE

www.greenbuildingstore.co.uk/page--natural-insulation-guide.html



Consider various kinds of loft insulation

Installing loft insulation can cut your energy bills and help keep your building nice and cosy. Read a special Which? report on the different types of loft insulation, their pros and cons, and how to fit them.

Explore more unusual materials to insulate your church

A warm blanket of sheep's wool has been helping to keep the temperature up – and heating bills down – in a church institute at the heart of a Welsh farming community. An Arctic winter sent costs spiralling and put the future of Henllan Church Institute, North Wales, in doubt. Rural regeneration agency Cadwyn Clwyd provided £79,000 of funding through their Innovation Denbighshire project towards installing insulation material made from sheep's wool – that it says has cut heating bills by 75 per cent.

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CREATING AN ENERGY SAVING HOME

www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-loft-insulation/types-of-loft-insulation

ALTERNATIVE INSULATION

<http://www.thefreelibrary.com/Church+building+warms+to+woollen+insulation+project%3B+NATURAL+SOLUTION...-a0274747510>



Review the environmental impact of different types of insulation

All insulation is beneficial. But certain factors must be considered to define its sustainable credentials, such as the source of the material. SIG Insulations, a leading distributor of insulation products, has produced a helpful publication simply entitled A Guide To Sustainable Insulation Materials. Materials featured in the guide are broken down into three sub-categories:-

- naturally occurring mineral, which refers to inorganic fibrous insulation taken from natural mineral-based substances;
- petrochemical, which is man-made insulation derived from raw materials of petroleum or other hydrocarbon origin;
- organic, which refers to insulation materials derived from living organisms.

SIG Insulations point out there are further things to consider which determine a material's sustainable credentials:

- levels of embodied energy;
- operational performance;
- post-lifetime recyclability.

INSULATION GUIDE

[www.sigtechnicalinsulation.co.uk/
pdf/brochure_SIG%20Insulations%20
Sustainable%20Materials%20Guide%202008.pdf](http://www.sigtechnicalinsulation.co.uk/pdf/brochure_SIG%20Insulations%20Sustainable%20Materials%20Guide%202008.pdf)



Online trade publication Building offers a summary of the environmental strengths and weaknesses of insulation products:

- mineral fibre-based products are made with recycled waste. Chemical binding agents form rigid sheets. Mineral fibre can be reused;
- mineral cellular products consist of recycled waste product and can be recycled as building aggregates;
- plastic cellular products are created mostly from oil-based raw materials, and some can be difficult to recycle and dispose of;
- plant and animal-sourced products use renewable raw materials with low environmental impact. Recycling and disposal are easy.

Read the full indepth report by Simon Rawlinson of Davis Langdon on the publication's website. Note that you may need to register on the website first.

THERMAL INSULATION

www.building.co.uk/sustainability-thermal-insulation/3075146.article



Check out how historic churches use modern methods

When Lis Goddard became vicar of a London congregation, she found the church centre had been condemned. And in her own words, the grade one listed Victorian building of St James the Less was 'leaking heat'.

Some new windows were installed. Secondary glazing was fitted to other existing windows. However, when it came to insulating the building, they found there was no void between roof and ceiling. That meant there was nowhere to install the insulation material using the conventional method of filling the gaps.

'We had to put it in internally in the building,' Lis explained, 'and we had to do it all sensitively. We had the insulation put inside the beams and painted to make it look like the original ceiling.'

Go further into the void

Deep insulation was installed in the roof of St Peter's Church, Knowl Hill, which dates from mid-Victorian times. This Berkshire congregation have been taking part in a Shrinking The Footprint Energy Audit to monitor and manage their energy use. A page of their website is devoted to their environmental work.

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MODERN METHODS

www.sjtl.org

ST PETER'S CHURCH,
KNOWL HILL

<http://www.wargravechurch.org.uk/index.php?zonename=carbonfootprint32>