

KEEPING THE HEAT IN: IMPROVING THE INSULATION AND ENERGY EFFICIENCY OF ULLAPOOL YOUTH HOSTEL – Scotland

SUMMARY

Project description: To improve the energy efficiency of the building and reduce bills while creating a more comfortable building to stay in by installing loft insulation in an uninsulated pitched roof.

Project type: Energy efficiency, Education in Sustainability

National Association: SYHA

Project location: Ullapool Youth Hostel

Estimation of number of reduced tonnes of CO₂: 2,940kg of CO₂ per year (nearly 3 tonnes)

Total funds requested: £2,270

Total project cost: £2,520

Annual £ saves and ROI (Return On Investment): £540 per year with ROI within 4 years

Why this project should be funded ahead of others: We work hard at Ullapool Hostel to make our destination eco-friendlier and are committed to working in a sustainable way while encouraging, educating and inspiring our guests to make more sustainable choices.

6 years ago we achieved Gold for Green Tourism and a Hoscar from SYHA senior management in recognition of our Green Management and initiatives. We have maintained our Gold grading largely through our community involvement on local environment (regular beach cleans, litter picks), local social community projects (member of the local primary school eco group), involvement and education on nature and culture (wildlife garden, volunteer with RSPB a nature reserves, providing guest information), and on waste management: Initiatives that cost time rather than money.

Please see our hostel webpage and blogs for more evidence:

<https://www.syha.org.uk/where-to-stay/highlands/ullapool.aspx>

<https://www.syha.org.uk/news-events/blog/2016/april/earth-day-2016.aspx>

<https://www.syha.org.uk/news-events/blog/2016/august/dive-into-scotlands-new-snorkel-trail.aspx>

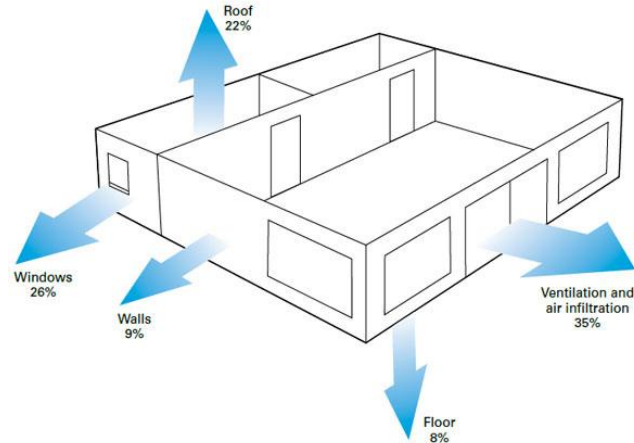
Our last Green Tourism Business Scheme audit highlighted a need for roof insulation which is below current regulations. The assessor noted this enhancement would make a significant difference to the building and improvement to the energy efficiency of the building.

With all SYHA hostels competing for limited funds and a focus on urgent measures or customer facing projects, our roof insulation is unfortunately overlooked. With the support of the HI Sustainability Fund we hope to seize the opportunity to achieve a more energy efficient building, become a more sustainable destination and continue to educate our guests by promoting our green initiatives and actions.



DETAILED PROJECT INFORMATION

Purpose/Objectives



Over 20% of heat in a building is lost through the roof. Improving insulation levels in this area can often be cost effective, particularly with pitched roofs as is the case at Ullapool Youth Hostel.

Installing loft insulation in an uninsulated pitched roof is likely to be the single most cost-effective way to improve the efficiency of building fabric and save money. In fact, insulating any loft spaces in a building could reduce heat loss by 25%, reducing heat loss and heating bills, thus providing a quick payback in 1-4 years. Loft insulation is effective for at least 42 years and it should pay for itself many times over.

We aim to improve the energy efficiency of the building and reduce bills while creating a more comfortable building to stay in. We will celebrate and educate by informing our visitors, the local community and the general public about the project and the simple steps that can be taken to create more energy efficient buildings

Methodology

- Materials: Mineral wool:

Mineral or glass wool comes in blanket form or high density slabs. This form of insulation has been used widely throughout the British Isles since the 1960s and 1970s and has a proven track record of performance.

- Method:

As access is easy and our loft joists are largely regular, we will use rolls of mineral wool insulation. The first layer is laid between the joists – the horizontal beams that make up the floor of the loft – then another layer is laid at right angles to cover the joists and make the insulation up to the required depth. Mineral wool blanket provides average thermal insulation properties. We would insulate to a depth of 300mm as recommended by our green assessor and the energy savings trust. See: <http://www.energysavingtrust.org.uk/home-insulation/roof-and-loft>

Monitoring Plan

We already monitor our energy usage monthly and would continue to do so for oil and electricity. Annual and monthly data will allow us to assess the improved energy efficiency of the building enabling us to continually improve and promote our energy usage.

Contribution of the project to sustainable development

As part of our commitment to sustainability and environmental issues, SYHA youth hostels are assessed by [Green Tourism](#), the largest and most established sustainable certification in the world. The assessment covers areas such as energy saving, waste minimisation, social responsibility and travel.

We share details of our environmental management with our visitors by detailing and celebrating our initiatives, action plans, energy usage and carbon certification directly at the hostel, through the annual SYHA Hosteller Magazine and online through social media and our hostel webpage. As such, we are able to highlight, promote and educate visitors, the community and the general public about sustainable development.

Environmental Impact

Heat rises, and in an uninsulated building, a quarter of heat is lost through the roof. Insulating our loft is a simple and effective way to reduce heat loss, reduce our carbon footprint, reduce our heating bills and promote this simple but effective action in order to inspire others to do the same.

Estimation of emission reductions

We have calculated using: <http://www.energysavingtrust.org.uk/home-insulation/roof-and-loft>

The property is 4 mid terraced houses knocked through into one.

Using the calculation table below we estimate CO2 savings to be 2940 kg CO2:

Loft insulation (0 to 270mm)	Detached house	Semi detached house	Mid terrace house	Detached bungalow
Fuel bill savings (£/year)	£240	£140	£135	£200
Typical installation cost*	£395	£300	£285	£375
Carbon dioxide savings (kgCO ₂ /year)	990 kg	580 kg	550 kg	820 kg

Saved Funds and ROI

Using the table above we estimate savings of £540 per year with ROI within 4 years.

Savings Generated

A reduction in energy bills will allow money to be re-directed into other green projects such as a more efficient boiler when the current one needs replacing and upgrading windows to double glazed units thus continuing the improvement to the energy efficiency of the building.

Communication plan

We will share details of the HI sustainability competition, the project itself and celebrate completion of the project with our visitors (domestic and international), local community and the general public through:

- Article in the annual SYHA Hosteller magazine.
- Article in the local Ullapool News newsletter
- Online through social media, blogs and our hostel webpage
- In the hostel on our dedicated Green Tourism noticeboard
- Intra hostel: Sharing the benefit of the HI sustainability fund so others can make their sustainability ideas a reality
- As such, we aim to celebrate, promote and educate visitors, the community and the general public about sustainable development, HI and SYHA commitment to sustainability and Green Tourism.

Please see the following links for examples of previous communications:

<https://www.syha.org.uk/news-events/blog/2016/april/earth-day-2016.aspx>

<https://www.syha.org.uk/news-events/blog/2016/april/earth-day-2016.aspx>

<https://www.syha.org.uk/where-to-stay/highlands/ullapool.aspx>

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