



CASE STUDY:

Highland Council HEEPS-ABS

External wall insulation

Swedish Timber Properties



PROJECT DETAILS

Project Name:

Highland Council HEEPS-ABS External Wall Insulation

Client:

Highland Council

Location:

Scottish Highlands

Value:

£2.5m

Contract Type:

Energy Efficiency Framework Contractor

Type of measure installed:

EWI to Swedish timber properties

Contractor name:

E.ON Energy Installation Services

Manufacturer/specification:

Wetherby Building Systems Ltd

Number of units:

Swedish Timbers 212

Karen MacLean, Project Manager, Highland Council

“The partnership with E-ON Energy Installation Services has been very successful and collaborative. The challenging nature of the area and delivery has meant that a novel approach has been required at times to ensure the Highland properties receive a high quality product for homes in need. The introduction of a silicone finish External Wall Insulation for the Swedish Timber homes has been a much welcomed initiative”

Nigel Dewberry, Director of Obligation Delivery, E.ON Energy Installation Services

“Recently I had the privilege of visiting properties being made energy efficient with External Wall Insulation under our Energy Efficiency Framework in conjunction with The Highland Council. We are delighted to be involved in the transformation of the Swedish Timber properties which were old and energy inefficient. The installation of External Wall Insulation will benefit those vulnerable customers towards a dramatic reduction in energy costs for their homes.”

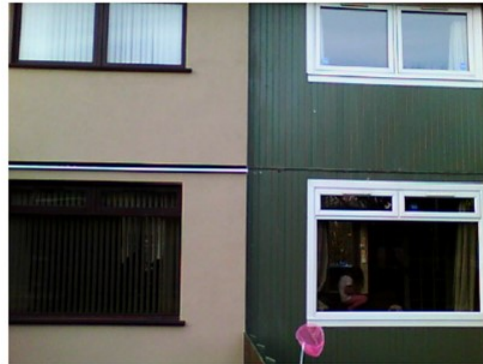
Images showing reduction in heat loss following EWI installation



Brief description

As part of the Scottish Government's fuel poverty strategy and The Highland Councils aim to lower energy bills, reduce carbon emissions, improve health and eradicate fuel poverty, The Highland Council and EON Energy Installation Services developed a tailored proposal for the refurbishment of 212 Swedish Timber properties in the Scottish Highlands. This scheme was part of the long-term delivery partnership between both organisations, utilising The Highland Council's Home Energy Efficiency Programme - Area Based Scheme (HEEPS-ABS) funding in partnership with E.ON's Energy Company Obligation (ECO). These aims were implemented by bringing investment and upgrades via External Wall Insulation (EWI) to properties of Swedish Timber Construction. The aim of the project was to look at insulation solutions for specific hard to treat housing that was previously considered too difficult or expensive in the past, particularly Swedish Timber properties due to these properties being hard to heat and solutions for insulation being limited due to the nature of the construction. The project wanted to develop a solution for such remote rural properties which could be replicated throughout different areas of the Highlands, focusing on improving structural integrity and creating thermal improvements to help homeowners reduce energy and carbon. The partnership installed energy saving improvements to properties within dedicated targeted areas, these were broadly Fort William, Skye, Caithness, Ullapool and East Sutherland within the Scottish Highlands. This helped the Highland Council achieve its aim of reducing homeowner's energy bills and achieving an overall carbon reduction of 19,716 tCO₂.

The installation of EWI to particularly hard to treat properties, such as Swedish Timber properties provides a safe and practical solution for rural housing applications, the outcomes and benefits of the project will be shared with housing associations and local authority partners to allow them to assess the option for other areas.



Energy Strategy

The Highland Council has a desire to provide, affordable efficient homes throughout the Highlands to eradicate fuel poverty and improve the health of its local communities.

By installing such interventions on remote rural particularly hard to treat properties, it has increased comfort levels, improved health and reduced energy bills whilst also raising awareness on energy use, conservation and efficiency. The project has been designed to coincide with both National and Local level strategies, which include, Fuel Poverty strategies, Scottish Government energy efficiency policies and housing policy. At a local level this has helped the council with achieving its local strategies such as the Highland Council Affordable Warmth Action Plan (AWAP) whilst also looking at the longer-term potential vision of developing wider solutions to align the future of Scottish Government policy such as Scotland's Energy Efficient Scotland (EES).

Challenges overcome

This project celebrates a successful delivery despite many challenges, such as the financial viability of delivering such tailored solutions logistically to sparsely populated locations throughout the Highlands, which can be challenging given the geographical areas covered, as well as the nature of the ever-changing environment in the given locations. To achieve this the programme was delivered over 13 different works streams with 7 compound locations throughout the Highlands.

One of the major challenges of this programme was to deliver a sustainable solution for Swedish Timber properties which could be replicated throughout the Highlands. Within the Highlands there is a large amount of varying construction types within the domestic sector which are classified as hard to treat. Swedish Timber properties are one of these constructions which are particularly hard to treat due to the nature of the build, the date of construction and many other factors which are not generally considered. The Highland Council and EON Energy Installation Services worked closely with Wetherby Building Systems and the local planning department to develop a fully approved system which meets all governance requirements relating to thermal improvement, structural integrity and fire safety. This solution was approved for installation via The Highland Council Building Control and implemented as part of this programme as a first-time solution for Swedish Timber properties throughout the Highlands.

Mr Stewart, Clunes Avenue

“The aesthetic change giving us a smooth exterior with very clean lines brings a smile to our face every time we set eyes on our home. The overall product has exceeded our expectation, stopping all draughts and holding the heat for a greater sustained period. Also to our slight amazement the sound-proofing of the product was an added extra. We have the aura of protection.

The lesser need for the boiler to fire we are expecting our next oil delivery to be much further down the line, where our oil is now situated in relation to previous years holds a very positive feel. During the installation we did suffer horrendous periods of weather but were always kept informed of progression and plans. The installation was Second to none excelling again all our expectations, very clean and the operatives always made sure the standard was high.

The aesthetic change to our property and others around has given our street and community the lift it deserves.”

Community Benefits

The Highland Council and EON Energy Installation Services teams organised and supported community events throughout specific targeted locations in order to answer technical queries regarding the solutions which was being proposed as part of the programme. These front facing events with individual communities ensured that residents had the opportunity to engage with the project delivery teams and satisfy and potential questions they had regarding the installation of the system. The teams were also in local communities with the EON ‘On the road’ vans publicising the benefits of the scheme and delivering any additional energy efficiency advice for local communities. This brought the community and contactors together to spread the message and ensure community involvement in the programme. In addition to this the EON team worked with the Highland Council for the sponsorship of events which will help drive future initiatives and investment. As per recent years there is also an ongoing commitment to support local trades and installers where possible, who are employed within the programme of works. This follows through a theme of re-circulating the local pound. Local commercial outlets have also benefited by an increase in revenue due to an influx of people working and supporting the programme throughout the Highlands.

Savings made

The economic benefits are very real with people reporting initial significant savings to the costs of running their homes. Not only does this solution improve the cost of running people's homes it also provides an improved external aesthetic appearance creating a greater feeling of pride within local communities. The savings when installing such solutions make a real impact that can take people out of fuel poverty and bring with it greater disposable income to support the local economy. The Highland Council and E.ON Energy Installation services will report further on energy savings post full winter heating period. The project also implemented data logging equipment to record the thermal improvements within the domestic dwellings which will be captured and shared with others to detail the full benefits of the solution relating to affordable warmth.

E.ON Energy Installation services worked in partnership with The Highland Council developing an awareness campaign for eligible residents. Energy advice was offered to residents, with the key savings made on energy bills anticipated to be £255 per annum. Other advantages of installing the measures included:

- Making homes warmer in the winter and cooler in the summer
- Boost the properties energy efficiency and EPC rating
- Improve the property value
- Reduction in draughts, condensation and damp.



Tiny Tags Report

The scheme was used in Broadford, Isle of Skye to partially fund cavity wall insulation in residences, and fitted with TinyTag temperature sensors which recorded temperature data before the cavity wall insulation was fitted to the homes, and continued recording after to see if any changes were noted.

As can be seen from the graphs below, there is a clear increase in the temperature of the properties before the EWI was installed compared to afterwards.

