

Helping Aberdeen residents improve their energy efficiency



Target group:
Building Professionals,
Housing Associations,
Local Authorities

Aberdeen City – Energy Efficiency Measures

Aberdeen City, Scotland

Year of works:
2016-2018

Number of
measures
delivered :
192

Current retrofit status:
completed

Overview

Everwarm have worked with Aberdeen City Council for over eight years now to deliver several Scottish Government funded Home Energy Efficiency Programmes (HEEPS) aimed at improving the energy efficiency of homes across the region. To ensure these programmes are truly area based, as is the intention of the Scottish Government, we've been proactive in engaging with local Housing Associations, encompassing both social and private customers.

The relationship we have with both Aberdeen City Council and Grampian Housing Association is built on a mutual commitment to improve the energy efficiency of the area, drive down the carbon footprint and arm residents with the understanding and knowledge they need to maximise their energy efficiency. SCARF, the local Home Energy Scotland agency, have been integral to this strategy. They've helped develop and deliver a consistent message throughout Aberdeen City's communities, helping residents understand and manage their energy consumption to drive down fuel bills.

In addition to delivering efficiency benefits, the programme has seen us establish long term roots in the area, including the establishment of a locally based workforce with a permanent office and warehouse. That team represents a variety of trades that span the services offered by Everwarm including engineers, operatives, support staff and technical design staff. Our Northern region numbers have grown progressively over the years and now stands at 60+ directly employed individuals, cementing our commitment to our client Aberdeen City Council and their communities.

As part of the ongoing HEEPS programme, in 2016 Grampian Housing Association, in partnership with SCARF and Aberdeen City Council, chose to direct award their energy efficiency programme 'Grampian tackling EESSH' to Everwarm. This saw us provide energy efficiency installations across Aberdeen City. The majority of properties within the scheme were flats, with each evaluated in its own right to ascertain the most viable measures based on construction type and resident engagement.

The range of measures in scope were solid wall insulation (including internal wall insulation), cavity wall insulation, loft insulation, room-in-roof insulation, boiler replacements and solar PV installations, cementing the Association's commitment to improve energy efficiency across the region and within their stock portfolio.

Tenure

The programme included both private owners and social housing residents. It was key therefore, to ensure the success of the scheme, to engage proactively and build a solid understanding with the community to in turn encourage active participation. Our inhouse surveyors visited each resident, not only verifying suitability of the measures, but talking the resident through the proposed works, their benefits, how to prepare for installation and what to expect during the installation process.

We then provided appointment reminders and regular updates to ensure our programme remained on track and our customers positively engaged.

Through the programme, we encountered many vulnerable customers each with requirements specific to their individual needs. With surveyors who are trained in customer care, and in particular the identification and support of vulnerable individuals, we were able to offer that support throughout all stages. This was reinforced with the support offered by SCARF, ensuring that in the delivery of energy efficiency measures, we were able to safeguard the health and wellbeing on Aberdeen City's most vulnerable residents.

Customer engagement

We faced a significant challenge in the delivery of the programme and that was the willingness to participate by some customers. At prestart stage, we suggested offering a range of solid wall systems including external wall and internal wall insulation to overcome this issue. This in effect would allow those tenants and private owners willing to sign up to still receive energy efficiency improvements where otherwise they would be excluded by blocking neighbours. It was a proposal that was readily accepted by our clients and saw us achieve the required sign up level. The table below shows the volume of measures delivered during the programme together with the approximate lifetime carbon savings achieved.

Measure installed	Volume of measures delivered	Approximate LTS of measures installed
Solid wall insulation (various systems)	162	5670T
Underfloor insulation	15	225T
Loft insulation	15	150R

Funding

HEEPS funding - Funding came primarily from the Scottish Government's Home Energy Efficiency Programmes Scotland (HEEPS) initiative. This scheme was developed to address the inequalities of previous energy efficiency programmes, which in effect saw private owners excluded from energy improvement programmes due to the high costs of measures. It was introduced to ensure we provided true area-based schemes to concentrate on whole communities rather than individual households in isolation. Everwarm have delivered several HEEPs based schemes for our clients throughout Scotland over the last seven years, including Aberdeen City Council. HEEPS funding for this programme was supplemented by ECO funding, the Feed-In-Tariff and the Grampian Housing Associations own capital investment budget.

ECO funding - Everwarm has been providing ECO funding in support of our energy efficiency programmes since the inception of ECO in 2013. We've worked proactively with all six big utility companies and Ofgem to be at the forefront of shaping all transition from ECO to Eco2, ECO 2t and now the current ECO3 scheme, managing over £100million of funding in that time. ECO funding is based on carbon savings with the lifetime savings calculated for each property and that saving converted to a financial value that contributes to the cost of measures installation. This allowed us to secure market leading ECO rates in support of Grampian Housing Association and Aberdeen City Council's programme contributing significantly to the financial viability of the programme.

FiT funding - Additionally, we worked with our clients to help them realise the Feed-in-tariff (FiT) for their solar PV installations, increasing the return on their investment. Although no longer open to new applications, the scheme provides monetary reward for energy generated by solar PV that feeds back into the system to support overall energy consumption during peak usage times.

Capital Investment Budget – The client, Grampian Housing Association, provided funding from their capital investment budget to meet the costs of improving their social properties, ensuring the programme was fully inclusive and allowed for a maximum improvement across the community as a whole.



Self-delivery team

Key to our ability to deliver the programme was our self-delivery approach. This afforded us a greater control over quality, consistency and agility of workforce not available with the subcontracted alternative. Headed up by Kevin Edwards, our locally based site manager, we assigned 9 insulation teams alongside a plumber, gas engineer, satellite engineer, electrician and blacksmith. The programme saw one heating installation completed and 58 solar PV installations were carried out by our renewables team to two storey properties within the scheme. Each installation carried a full guarantee with solid wall installations having additional insurance backed guarantees ranging from 10 years to 25 years, providing long term peace of mind for both private owners and Grampian Housing Association. Each system installed was BBA approved and completed to PAS 2030 standards with all PV installations being MCS certified.



Client reporting

This programme saw us work with both our main client Grampian Housing Association and local energy agency SCARF. We adopted a partnership approach to ensure a consistent and reassuring message was delivered to the community. This called on a high level of accountability and reporting on our part. At pre-start stage, we agreed both a customer and client communication strategy. For our client this included a prescribed set of Key Performance Indicators (KPIs), ensuring clarity across all deliverables and a schedule of monthly progress meetings to report our performance against KPIs.

For this particular programme, KPIs included:

- Security and realisation of ECO funding by Everwarm on behalf of our clients
- Adherence to agreed programme and budget, taking account of changes in measure volumes.
- Customer satisfaction rates (minimum requirement 90%) – Everwarm exceeded this KPI
- Defects liability rate and response time for call outs.

Additionally, we provided weekly reports detailing sign ups received that week to assure our clients and our ability to deliver to the agreed programme.



Added Value

Working with SCARF allowed us to ensure that not only did residents receive energy efficiency improvements, but they also received additional advice pertaining to their circumstances to help them understand their energy efficiency. The impact of this was significant in helping residents understand their energy usage and maximise their bill savings. It also helped build on an already positive rapport between Grampian Housing Association, SCARF and the local community.

We were also able, through this programme, to increase the employment opportunities available locally and cement our commitment to the region. It was during this time that we extended our local presence from a small satellite office to our permanent Turriff base, to service all of Aberdeenshire and Aberdeen City. Working with SCARF, we were able to ensure that new opportunities were visible to local residents. This has several benefits including:

- Growth of local employment
- Increasing our local presence to manage costs effectively
- Ensuring money spent remained within the local economy.

all of which provided true value for money.

“We were very happy with the work that was completed. It was done quickly and with little disruption. We’re noticing a difference in the heat already. We’ve had to turn the heat down

”



Innovation

Going forward, we're discussing with our client the use of injected internal wall insulation as a more energy efficient and convenient alternative to traditional IWI which formed part of our original solid wall programme. It also provides additional choice to our clients, expanding our offering to suit their exact needs. Injected IWI is an innovative product new to the market. Everwarm was at the forefront of its development alongside research institute Napier University and insulation manufacturer Energystore. This technology provides a more economical and less invasive solution, taking less time to install and is aimed at tenement properties. It also retains the original dimensions of the room. Additionally, with injected IWI we can treat areas of the home previously unable to be treated, or only able to be partially treated e.g. kitchens where units are fixed to the walls preventing traditional IWI. It reduces the disruption within the property, reduces the cost of install and give an enhanced thermal uplift in comparison to traditional IWI insulation.

A recent pilot programme saw us install injected IWI within social domestic properties. The properties were occupied throughout the works. As part of that pilot, we tested the thermal performance of the buildings both before and after the works, to substantiate our findings. The results are shown in the table below with an average thermal performance uplift of 53% and an average increase of 6.7 SAP points.

IWI works	SAP improvement	U-Value Improvement (%)
Property 1	6	49.5
Property 2	8	57.4
Property 3	7	49.0
Property 4	8	79.2
Property 5	5	35.9
Property 6	6	49.3

The system provides the same robust guarantees as with the traditional system. It has full 3rd party accreditation with KIWA and comes with a GDGC 25-year guarantee providing residents with complete peace of mind.

any question?



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Information



Interreg ACE Retrofitting project:

<https://www.nweurope.eu/projects/project-search/accelerating-condominium-energy-retrofitting-ace-retrofitting/>

Everwarm

<https://www.everwarmgroup.com/>

Saving Energy Aberdeen web platform

<https://www.savingenergyaberdeen.co.uk/>

Aberdeen City Council energy efficiency web pages:

<https://www.aberdeencity.gov.uk/services/housing/home-energy-efficiency>

You too are facing the challenge of the energy retrofitting of privately-owned condominiums in your city?

The ACE-Retrofitting project aims to develop a governance model facilitated by cities linking owners and building professionals to accelerate condominium energy retrofitting. The French CoachCopro tool will be upgraded and adapted to other countries.

The consortium is composed of Agence Parisienne du Climat (France), Maastricht University (the Netherlands), Energy House Antwerp (Belgium), the City of Liège (Belgium), Aberdeen City Council (UK), Frankfurt Energy Agency (Germany), the City of Maastricht (the Netherlands), Changeworks (UK) and Energy Cities (coordinator). Study visits are organised in the partner cities of the consortium.

www.nweurope.eu/ace-retrofitting



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