



**Waterford**  
Credit Union

*in association with*



Enjoy a warmer and more energy efficient home  
with a **Green Loan** from **Waterford Credit Union**  
and **Encon's 5-step process**.

### **Encon's Home Energy Upgrades**

- External Wall Insulation
- Internal Wall Insulation
- Cavity Wall Insulation
- Roof Insulation
- High Efficient Boiler and Heating Controls
- Air to Water – Heating Systems
- Solar Solutions
- Demand Control Ventilation (DCV)
- Mechanical Ventilation Heat Recovery (MVHR)

*Financed by: **Waterford Credit Union***

*This brochure was printed using recycled paper and sustainably grown forest material.*

If you would like to discuss alternative loan amounts please give our lending team a call on **051-861 616** or check out our loan calculator at **waterfordcu.ie/loans**



Waterford Credit Union Limited is regulated by the Central Bank of Ireland. Each loan is subject to individual assessment. If you do not meet the repayments on your loan, your account will go into arrears. This may affect your credit rating. Variable rate of 6.5% (APR 6.70%). T&C's apply.

## The Encon 5-Step-Process to a warmer home

Achieving a Warmer, Healthier home has never been easier with Encon's 5 Step Process.

- 1** Contact Conor on 051-850722 to arrange a suitable time for one of the team to call and inspect your home to ensure you get the most from your plan.
- 2** Encon will develop a Home Energy Assessment (HEA) outlining your current Building Energy Rating and a roadmap for improvement of your home's energy efficiency along with costs and grant entitlements.
- 3** Once costs are agreed, an official proposal is presented to you the homeowner and from there the customer can contact Waterford Credit Union to apply for a Green Loan (cost of work to be completed less grants available)
- 4** Once loan and grants approved, Encon will complete the work to the highest standards as set out by the SEAI and NSAI. The Green loan will be paid directly to Encon.
- 5** Your home will get a thorough inspection to make sure that everything is to the specification agreed. A final BER is provided to certify the changes made to your property.

# B3 Home Energy Upgrade

This project was part funded by the Better Energy Homes Scheme, coordinated by Encon and supported by the Sustainable Energy Authority of Ireland (SEAI).

## Case Study Details

### Deep Retrofit of a 3 Bed Semi-detached Home

#### Project Details

External Wall Insulation, Mineral Wool Attic Insulation, Heating Control Upgrade, Double Glazed PVCu Windows and PVCu Front Door

#### Pre Works - Building Energy Rating (BER) - D2

292.10 kWh/m<sup>2</sup>/year  
74.50 kgCO<sub>2</sub>/m<sup>2</sup>/year

#### Post Works - Building Energy Rating (BER) - B3

122.95 kWh/m<sup>2</sup>/year  
33.75 kgCO<sub>2</sub>/m<sup>2</sup>/year



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## The Benefits

### Wall Insulation

This home was originally built using a solid concrete wall structure without insulation. By fitting 100mm External Insulation we reduced the heat loss dramatically, making the home more comfortable and more cost effective to run. An added benefit was the reduced risk of condensation and the threat of mould growth on the internal walls of their home.

### Attic Insulation

The roof space of this home had no insulation. Our installers used 300mm Knauf Earthwool which is made from recycled plastic bottles, insulating the pipes and cold-water storage tank (CWST) in the process. Furthermore, an insulated storage platform was installed to maintain safe access to the CWST and offering substantial storage solutions without disrupting the insulation integrity of the Home Energy Upgrade.

### Heating System

Encon installed zoned heating controls here at the property. Depending on the pipe configuration the results will vary. This home received a 3 Zone Heating Pack. This means they can now turn on the heating downstairs separate from upstairs and the hot water can also be heated independently. Each Zone is controlled by both room stats and TRV's on the radiators, giving the occupants far greater control of their energy demand. They can also heat their water in the summer using natural gas which is a far more efficient method then using an immersion heater.

### Ventilation

Encon installed natural ventilation, providing comfort and quality indoor air.

### Windows and Doors

Encon provided PVCu double-glazed argon filled low energy Windows and Doors. These units were fully sealed to the structure internally using air tightness tapes preventing any future draughts occurring.

### The Cost

Under the Individual Energy Upgrade Grants process the client is required to pay the full amount and upon completion claim back the pre-approved rebate from SEAI. This project cost the homeowner €23,437.75 after grant rebates of €7,900.00.

# A2 Home Energy Upgrade

Encon's deep retrofit was part of the 2021 National Retrofit Programme, coordinated by Encon and supported by the Sustainable Energy Authority of Ireland (SEAI).

## Case Study Details

### Deep Retrofit of a 3 Bed Semi-detached Home

#### Project Details

Cavity Wall Bonded Bead, External Wall Insulation with Clay Brick Slip Facade, Mineral Wool Attic Insulation, 4KW Air to Water Heat Pump, Airtightness Detailing coupled with Demand Control Ventilation, Triple Glazed PVCu Windows and Hard Wood Front Door.

#### Pre Works - Building Energy Rating (BER) - D2

249.35 kWh/m<sup>2</sup>/yr  
62.40 kgCO<sub>2</sub>/m<sup>2</sup>/yr

#### Post Works - Building Energy Rating (BER) - A3

60.20 kWh/m<sup>2</sup>/yr  
11.84 kgCO<sub>2</sub>/m<sup>2</sup>/yr



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## The Benefits

### Wall Insulation

Originally this home was built with a 50mm EPS Cavity Insulation. Using Cavity Wall Bonded Bead Insulation Encon injected the remaining cavity. This process eliminates thermal looping and improves the overall heat loss of this element within the structure. The homeowner opted for a deeper upgrade to the fabric on this home and chose External Wall Insulation with both an Acrylic and Clay Brick Slip finish.

### Attic Insulation

The roof space of this home was originally insulated using a 100mm Fiberglass Quilt Insulation. Our installers used 300mm Knauf Earthwool which is made from recycled plastic bottles, insulating the pipes and cold-water storage tank (CWST) in the process. Furthermore, an insulated storage platform was installed to maintain safe access to the CWST and offering substantial storage solutions without disrupting the insulation integrity of the Home Energy Upgrade.

### Heating System

Encon installed a 4KW Daikin Air-to-Water heat pump system to provide the home with reliable, trouble-free, renewable heating and hot water. The existing radiators were upgraded with new low-temperature radiators with temperature-regulating valves.

### Ventilation

Encon installed natural ventilation in the roof and Demand Control Ventilation (DCV) internally within the home. DCV controls humidity levels while also providing fresh air into the home.

### Windows and Doors

Encon chose PVCu triple-glazed argon-filled low-energy windows and doors. These units were fully sealed to the structure internally using airtightness tapes, preventing any future draughts over time.

### The Cost

Under the SEAI grant process, Encon collected all grant rebates direct from SEAI, meaning the homeowner was only required to pay the NET difference. This project cost the homeowner €49,143.90 after receiving grants of €26,462.10.