Beattie Passive

Retrofit – TCosy™

Beattie Passive Retrofit – Transforming Homes, Improving Lifestyles

What is Retrofit?

Retrofit involves increasing the energy efficiency of existing buildings with the aim to help households save money on their bills, reduce their emissions, and make their homes warmer and more pleasant places to live.

Why do we need to Retrofit?

The UK's housing stock is amongst the least energy efficient in Europe, and is responsible for nearly a quarter of our annual carbon emissions. With the Government committed to reducing carbon emissions by 80% before 2050, it is estimated that over 20 million homes in the UK will need a low energy retrofit to enable us to live and work more sustainably. Over 2 million people in the UK are living in fuel poverty, retrofitting will reduce heating bills, lift residents out of fuel poverty, and provide them with a healthier, more comfortable place to live.

Retrofit Innovation – TCosy™

Beattie Passive's TCosy™ is an innovative approach to large-scale retrofit. It provides a fast, low cost and highly replicable solution for a wide range of buildings. The TCosy™ dramatically reduces energy requirements, creates a healthier living environment and can be delivered whilst residents remain in their home.

Key Benefits of Retrofit:

- Dramatically improve the energy efficiency – up to 75% reduction in heating requirement
- A new look home – completely new external façade
- Increase the value of the property
- Resident stays in their home during the Retrofit
- A healthier, warmer living environment

"We have designed the Retrofit process to be as simple and efficient for all parties involved."
Ron Beattie, Managing Director, Beattie Passive

"Improving 20 million homes by 2050 requires a retrofit rate of more than one per minute."
Institute for Sustainability

Case Study

Retrofit for the Homeowner – Oxfordshire

Transformation from 1970s to Contemporary

Houses built in the 1970s are often poorly insulated but by retrofitting with the Beattie Passive TCosy™ system, high standards of airtightness can be achieved which reach Passivhaus certification criteria. Not only energy- and financially efficient, levels of comfort in the home are improved by maintaining a constant, comfortable indoor temperature.

Brief:

To extend and retrofit a 1970's three-bedroomed house to Passivhaus standard while aesthetically updating it to create a light, modern and energy-efficient family home.

Project scope:

To design and build a two-storey extension to the west side of the house and a first floor extension above the garage to the east. The extensions were built to Passivhaus standard, and the existing building is retrofitted with the TCosy™. High performance windows were fitted throughout and a Mechanical Ventilation Heat Recovery system installed to maximise energy efficiency, ensuring no heating system would be required.

The kitchen and bedroom extension to the west of the house were constructed from re-used materials – primarily timbers and Versapanel – from an earlier Beattie Passive R&D project. This prototype building was dismantled and the materials cut to size for the Woodstock project.

Not only does this keep the project's carbon footprint to a minimum but it demonstrates how Beattie Passive select materials which can readily be re-used at the end of a building's life. This provided a carbon zero footprint.

Client Verdict:

"We're delighted to be enjoying the best of all worlds: we've significantly increased our living space, hugely improved our energy efficiency, whilst also improving and updating the aesthetic appearance of our home. Not only has Beattie Passive technology been cheaper than traditional building methods but it was also important to us that Beattie Passive used materials which are readily available from sustainable sources".

Paul Williamson, Homeowner