# **Case Study**



Client: Ty Croes • System: Wall System 2 • Material: EPS, Mineral Render, Nanosil Sector: Low Rise, Residential • Build Type: Refurbishment

RCM







#### **CPD** events available

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The improvements have been completed in South Wales using external wall insulation systems from SPSenvirowall to provide residents with improved thermal performance and reduced energy bills whilst providing an attractive façade.

### The Objective

Completed in December 2017, phase 4 of the programme was completed by Joyners, installing external wall insulation to 40 properties.

It was found after an assessment of a typical 2 bedroom mid terraced property in Sandfields that the energy performance rating before works was a low F, which has since been improved to a C rating after works such as solid wall insulation and other measures were carried out. It found that solid wall insulation alone can reduce fuel bills by over £300 per year.

### The Challenges

The client, Ty Croes, required a system that provided a quick and cost-efficient solution to reduce disruption to residents, improve thermal performance and limit traditional weak points for water penetration at junctions of the roof and main wall areas of the dwellings.

During the 4th phase of the scheme it was vital that the work was carried out to meet their deadline to keep within budget and reduce the need for further funding.

Supported by both English Heritage and Cadw, a characterisation study was carried out with residents which aimed to identify the character of the area and existing architectural features.

Joyners, were tasked with providing an attractive finish to uplift the local area with the use of architectural profiles to boost the appearance of the properties, making the refurb sympathetic to the built environment.









# Sandfields Scheme 4

To achieve this, SPSenvirowall was able to help replicate the existing plinth detail using an extruded polystyrene board while using a low level aluminium base rail to ensure minimal damage to the system in the event of future ground works or pavement replacement.

In addition, with no access to the rear of the property, Joyners were required to entirely scaffold each property in order to carry out work to the back and also transfer the materials required. This avoided inconvenience to the tenants by accessing the rear through the property itself.

Due to the nature of the area, where narrow terraced streets and one way systems are the norm, Joyners required an area for storage and were able to acquire a small space near a local school. Due to SPSenvirowall's locality, we were able to ensure that deliveries of materials were as flexible as possible so that Joyners had products as and when they were needed and at suitable times to prevent any disruption to the school rush hour.

## The System

SPSenvirowall's Wall System 2 Direct to Masonry provided the solution, designed to provide cost effective and robust external wall insulation, ideally suited to this type of project. 90mm of SPSenvirowall EPS was used together with Granomin, a thin coat mineral render, and Nanosil, a high performance silicone paint, at the front, while dash was used at the back of the property. What makes this an exceptional project is how refurbishments usually focus on energy savings and not on cold bridging. This scheme is ground breaking in how it has tackled cold-bridging with the use of insulated guttering, insulating the plinths and the use of high tech aerogel insulation used to eliminate any points of potential cold bridging using strips around the window reveals, cills and doors, thought to be one of the only schemes using this technology in the UK.

## The Benefits

The newly refurbished properties have provided a welcome boost to the area with their attractive facades and vibrant coloured render which adds a touch of modernity to the Victorian style housing while still maintaining the traditional architectural features.

Residents can hope to save on their fuel bills and enjoy a comfortable and warm, temperature controlled home with a U-value of 0.21kW/m2K - 0.3 kW/m2K and were been pleased with the quality of the work and variety of render colours on offer.

We supply external wall insulation, render and cladding to contractors across the UK. Once installed, homeowners or residents can expect not only to save money on their fuel bills but a beautifully refurbished house, with external walls which look like new.

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