A 1980s semi-detached home on our rent roll became void and we used the opportunity to retrofit it, making it lower carbon and hopefully more efficient to run for the next residents..

The property was cavity wall construction and pointed brickwork. The pitched roof had concrete tiles and was supported by timber trusses. There was a gas combi boiler installed that was fully depreciated and needed replacing.



**Westend Avenue**

**Torfaen**

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The property’s EPC rating was 70 C.

# Investment

We used ORP 3.1 funding to complete the works to install measures making this home more environmentally friendly. The work took place while the property was empty and ran from November 2023 to July 2024.

# Westend Avenue, Torfaen

**Retrofit measures included:**

* Solar
* NexGen infrared heating panels
* Sunamp hot water system
* Aico energy monitoring system

We are using a combination of NEXGEN for heating and SUNAMP Thermino for the hot water. We also installed solar panels which will provide energy to run the Sunamp and also reduce the need for energy from the National Grid.

With these measures we aim to improve the energy efficiency of the property.

Asbestos was discovered in the ceiling and so we arranged for its safe removal and disposal. While ceilings were down following asbestos removal, we carried out a rewire and installed a new consumer unit. It was more efficient to carry out these works while the property was void and accessible. We also installed Aico monitoring system, that will measure the energy usage and humidity levels in the property and help us to evaluate how successful these measures are.

## Collaboration

**NexGen**

This innovative product is an electric wallpaper, delivering a unique heat combination of 50% Far Infra-red radiant heating and 50% conductive heating.

It is an ultra-safe, low voltage, low surface temperature system with zero risk of any human injury. NexGen is a ‘zoned’ system room-by-room, applied to 70–90% of the ceiling, heating from the top down to optimise thermal efficiency. The large area coverage ensures there is no temperature gradient across the room, the heat it gives off

**A NexGen heat gun** feels like gentle sunlight.

**SunAmp Thermino**

This small and smart hot water system is an alternative to direct hot water cylinders.

# Westend Avenue, Torfaen

The hot water batteries maximise the use of renewable energy and can be charged by air-source heat pumps, ground-source heat pumps, grid electricity, boilers, and are also future-proofed for solar PV. Here the system is being powered by Solar PV.

## Collaboration

Torfaen Maintenance Services were the principal contractor for this project. They installed the Sunamp and Nexgen systems and carried out all the void work including installing a new kitchen, work to bring the property to WHQS standard, and decorating and carpeting.

The asbestos removal was carried out by TMS Environmental, and the solar panels were installed by Gibsons.

## Achievements

Following the work the property’s EPC rating has improved dramatically to a predicted B 87.