

An Air Source Heat Pump For Ebbw Vale Institute, Ebbw Vale



ProMo-Cymru is a youth enterprise organisation specialising in the cultural industries with a history of supporting innovative and experimental creative industry for young people.

Using 'Heads of the Valleys' grant funding from the Welsh Assembly Government, ProMo-Cymru is currently refurbishing Ebbw Vale Institute (EVI), an 1849 Grade II listed stone building, into a lively community arts and music centre for the Blaenau Gwent area of South Wales.

The Problem:

The building, once used as school and owned by the Local Authority was designated for demolition because it required major refurbishment and suffered from an inefficient heating system with old gas boilers and cast iron radiators.

ProMo-Cymru took up the challenge to restore the building to its former glory. They were aware that the antiquated heating system would need to be upgraded to reduce both running and maintenance costs and they wished to find a sustainable solution.

The Solution:

Through architect Geof Cheason, WDS Green Energy were contacted to see if they could find a solution.

Two **40kW air source heat pumps** developed specially for the commercial sector were installed at the rear of the building to provide low grade heat to the building. The original cast iron radiators were retained where they were able to emit enough heat to keep the building warm, and Smart Rads were added to supplement the old radiators.

Due to the listed nature of the building, ProMo-Cymru were unable to cut the enormous heat loss of the building through insulation or double glazing so a small gas boiler was installed to supplement the heat pumps in extremely cold weather.



The Benefits:

Concerns were raised over whether noise from the leviathan heat pumps would infiltrate the brand new state-of-the-art recording studios situated at the back of the building near the heat pumps, however the 'owl wing' technology used on the heat pump fans meant that extraneous noise would never be an issue.

Extensive energy saving measures - double glazing, loft insulation, draft proofing etc. has been carried out more recently and has reduced energy consumption considerably, resulting in a more comfortable building and lower running costs.

Using the existing radiators saved precious monies on the renovation and ensured that the building kept its character and original features.

