

New Ecodan heating system delivers a touch of animal magic at Welsh rescue facility

Heating



Homeless dogs at the North Clwyd Animal Rescue facility are being kept in canine comfort following the installation of a new Mitsubishi Electric Ecodan air source heat pump.



The Renewable Solutions Provider
Making a World of Difference

The previous system featuring infra-red heating lamps was not particularly effective at keeping the rescued animals warm and the bulbs would regularly fail.

The animal rescue team needed a reliable, low cost heating system that would help reduce energy costs and turned to renewable energy specialists Hafod Renewables.

The newly installed system is comprised of a sophisticated air source heat pump powered by an array of solar panels. This ensures that the indoor air temperature is kept at a comfortable 20°C as hot water is directed through a quarter of a mile of pipework running beneath the kennels

The combination of an air source heat pump and a roof full of solar panels will deliver significant energy savings, reducing annual running costs from £3,600 to £400 and fully paying for itself in under five years. This will considerably boost the energy performance certificate rating of the facility and cut its carbon footprint by 80%.

With solid concrete floors ideal for underfloor heating, a large roof for solar panels and sitting off the gas grid, the decision to install the new renewable system was a straightforward one.

David Jones, Managing Director of Hafod Renewables, explains:

“Air source systems are extremely good at heating large spaces like this. The old system required a lot of maintenance and used a lot of electricity from the grid while the new system runs itself with the solar panels, providing clean electricity to run the highly efficient air source heat pump that drives the underfloor heating at a low-grade temperature.”



“ We tend to have a lot of older dogs and we always do our best to look after them - the new heating system means they'll be toasty throughout this winter and many more to come. ”

Nicky Owen

North Clwyd
Animal Rescue Media and
Fundraising Manager

As there was no wet heating system in the building, the pipework, pumps and expansion vessel had to be installed in a tight space within the dog prep room and a Mitsubishi Electric Monobloc Hydrobox system was put in place in order to keep everything running smoothly.

The Hydrobox system is designed to interact seamlessly with the Ecodan heat pump range, utilising advanced weather compensation to ensure that the system delivers efficient and comfortable heating regardless of the time of year and displaying information via a simple graphical user interface.

Having previously spent thousands of pounds on replacing bulbs, the new economical and low maintenance heating is proving to be a hit with both animals and staff and means that more money can be spent on animal care.

Caring for 1,800 animals a year isn't cheap, with costs coming in at around £1,000 per day, but the reliable heat output and efficiency savings provided by the heat pump and underfloor heating will make a real difference.

Finished in November 2017, the renewable, eco-friendly system has ensured comfortable temperatures throughout the winter months and the charity is already looking at the possibility of introducing additional changes further down the line.



Installation Summary



- X1 Ecodan PUHZ-(H)W Air Source Heat Pump
- X1 Ecodan FTC5 Packaged Hydrobox



PUHZ-W50VHA2(-BS)



EHPX-VM2C

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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air-conditioning equipment and heat pump systems contain a fluorinated greenhouse gas: R410A(GWP:2088), R32(GWP:675), R407C (GWP:1774) or R134a (GWP:1430). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows: R410A(GWP:1975), R32(GWP: 550), R407C (GWP:1650) or R134a (GWP:1300).



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