

Case Study

Warm and cosy on the Cheshire savannah



Chester Zoo is one of the UK's largest and most popular zoos. The 130-acre site in Cheshire, is home to more than 30,000 animals and more than 500 species.

 **Chester
Zoo**

This world-leading conservation and education charity is committed to preventing extinction and dedicated to raising awareness of conservation and environmental challenges.

Last year, the zoo created the UK's largest ever zoo habitat, with the Heart of Africa experience, and a major part of that development is a home for animals that are normally found in the African savannah.

But caring for zebra, ostrich and roan antelope in the depths of a Cheshire winter calls for reliable heating and, for Chester Zoo, this also needs to be sustainable.

"We know that we can't be part of the problem that we're trying to solve, so we need to develop sustainable plans that help the Zoo reduce carbon emissions and achieve net zero," explains Jennifer Kelly, Head of Sustainability at Chester Zoo.

Chester Zoo is the most popular paid attraction in England outside of London with a record 2.1 million visitors in 2025. It is widely recognised as the top UK zoo and is often ranked among the best in Europe.

As a world-leading conservation and education charity, the zoo is committed to preventing extinction and dedicated to raising awareness of key conservation and environmental challenges.



In partnership with Mitsubishi Electric the zoo is showcasing the best in heat pump technology in some of the most challenging applications to help inspire others to act.



“Heart of Africa is the largest zoo habitat ever created in the UK and it has been designed with sustainability at its core,” explains Robert Arathoon, M&E project Manager. “We’ve thought about everything so that we can keep the animals comfortable using renewable heat pump technology to minimise our carbon footprint.”

The sustainable solution for the zebra, rowan antelope and ostrich indoor habitat features two Mitsubishi Electric CAHV commercial heat pumps delivering 80 kW of heat capacity to the building.

Above the animals enclosures are radiant panels which heat each animal area and provide a range of temperatures from 18 to 24 degrees.

“We’re able to deliver different temperatures to different parts of the habitat to make sure that each animal has got the right environmental conditions to exactly match their needs,” explains Chris Newman, Net Zero Design Manager for Mitsubishi Electric.

“Our partnership with the zoo is not just about decarbonising existing buildings on the estate, but also about making sure that any new buildings are also designed and built with sustainability in mind.”



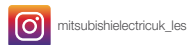
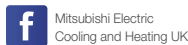
Installation Summary

Outdoor Units:

- 2 x Ecodan CAHV commercial heat pumps



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Note: The fuse rating is for guidance only and 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), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). *These GWP values are based on IPCC 6th edition.

Effective as of February 2026

