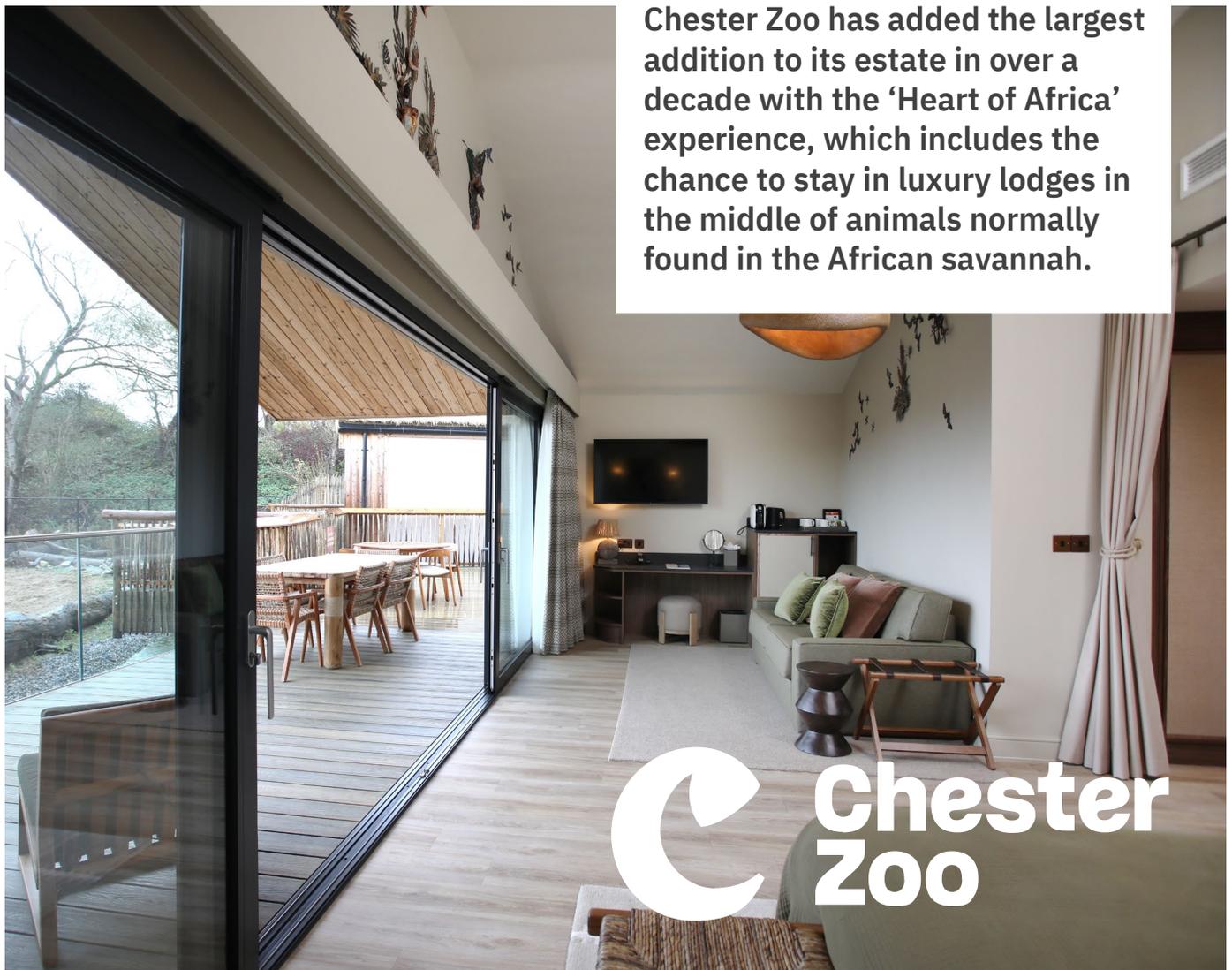


Case Study

Sustainable comfort in the Chester savannah



Chester Zoo has added the largest addition to its estate in over a decade with the 'Heart of Africa' experience, which includes the chance to stay in luxury lodges in the middle of animals normally found in the African savannah.

Case Study

Sustainable comfort in the Chester savannah Chester Zoo, Cheshire

The Reserve is a collection of 51 superb lodges which allow guests to wake up and see giraffe, zebras and antelope right outside their bedroom window.



Like the rest of the zoo, the lodges have been created with sustainability front of mind in the design of the accommodation, so renewable heating and sustainable cooling were a must.

The result sees innovative, low-carbon solutions incorporated into the design, with a combination of Ecodan R290 air source heat pumps and R32 multi-split air conditioning units.

These are part-powered from photovoltaic panels alongside a living roof, to maintain a comfortable indoor environment whatever the weather outside in Cheshire.

Sustainability was planned right from the start in the design of each lodge with the latest technologies installed by TDC from their Chester office, as Dave Kinsley, Project Director for TDC explains: “Both the heat pump and the air conditioning units incorporate refrigerants with lower Global Warming Potential to meet the sustainability values of the Zoo.”



Case Study

Sustainable comfort in the Chester savannah Chester Zoo, Cheshire

Chester Zoo has been working with Mitsubishi Electric to decarbonise heating right across the 130-acre site in Cheshire with heat pumps installed to keep the East African Black Rhino cosy, in the exotic Butterfly habitat and, most recently, for savannah animals like the zebras, roan antelope and ostriches.



These low-carbon solutions work quietly and effectively all year round and by integrating renewable heating and energy efficient cooling into the lodges, Chester Zoo is not only creating comfortable spaces but also demonstrating what the future of environmental responsibility in visitor attractions can look like.

By investing in heat pumps and energy-efficient heating and cooling systems, the zoo is actively reducing its carbon footprint while ensuring the animals and visitors enjoy a safe and welcoming environment.

“Whilst we are providing air source heat pumps across the zoo to deliver excellent climate temperatures for the animals, we’re also achieving exactly the same in the lodges for our guests,” explains Robert Arathoon, M&E Project Manager for Chester Zoo.



Case Study

Sustainable comfort in the Chester savannah Chester Zoo, Cheshire

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

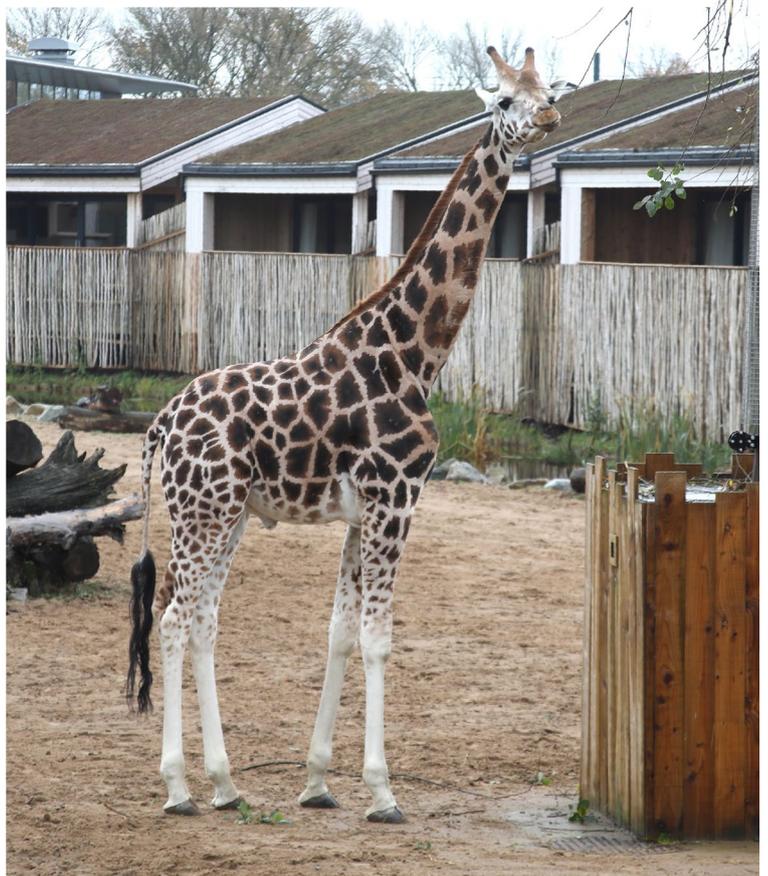


As a world-leading conservation and education charity, the zoo is committed to preventing extinction and dedicated to raising awareness of key conservation and environmental challenges.

“As part of our commitment to sustainability at Chester Zoo, we have an ambitious target to be net zero in our Scope one and two emissions by 2030. A critical part of it is decarbonising heat right across the site,” adds Jen Kelly, Head of Sustainability at the Zoo.

The partnership with Mitsubishi Electric is helping deliver this and is also showcasing the best of this technology in some of the most challenging applications to inspire others to act.

“Chester Zoo has demonstrated with these fantastic lodges how you can marry sustainability and comfort together,” explains Chris Newman, Net Zero Design Manager for Mitsubishi Electric. “Whatever time of year people visit this fantastic venue, the lovely comfortable atmosphere in each lodge mean this is the closest thing you can get to being in an African savannah right here in the UK.”



Installation Summary

Outdoor Units:

- 5kW and 6kW R290 Ecodan air source heat pump
- 200 litre packaged cylinder
- 5.4kW MXZ-2F54 Outdoor unit
- 3.5Kw SUZ-M35 Outdoor unit
- 3.5kW SEZ-M35 ducted units

ecodan[®]

Multi-Splits



5/6kW Ecodan ASHP



200l Packaged Cylinder



MXZ-2F54



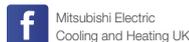
SUZ-M35



SEZ-M35



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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

