

## Case Study: Bristol Zoo Gardens



### Renewable solution for Bristol Zoo Gardens

**Requirement:** Energy-efficient heating solution for new ring-tailed lemur enclosure

**Client:**

Bristol Zoo Gardens

**Bristol Zoo Gardens:**

Bristol Zoo Gardens is the fifth oldest zoo in the world. Located in the heart of Bristol, it works to create a sustainable future for wildlife and people, with conservation at the heart of everything it does.

**Requirement:**

Bristol Zoo Gardens needed an energy-efficient way of heating their new lemur enclosure, that would keep the lemurs warm and cosy whilst having the minimum impact on their living space and visitors viewing enjoyment.

**Scope of works:**

This was an unusual and fun project to work on!

As always, our starting point was to carefully listen to the zoo's full requirements, which included the need for the lemurs to be kept at a constant temperature of 22°C and for a solution suited to the rigours of an animal enclosure.

Once completed, and having scouted the new enclosure area, we recommended and installed a Mitsubishi Ecodan PUHZ-W50VHA2 heat pump, Perimeter Heating System for heat distribution and heating controls.

The air-to-water source heat pump is an ideal solution for the zoo. Easy to maintain, quiet and capable of operating in outside temperatures as low as -20°C, it perfectly matches the zoo's needs and sustainable ethos.

We even worked with Bristol based Hydrowrap to hydro-dip the heat pump and disguise it

with a foliage print so as to help minimise its impact and ensure it blended in with the natural vegetation surrounding the enclosure!

The Perimeter Heating System is a skirting board style solution with panels housing hot water pipes mounted on the inside walls of the enclosure just above floor level.

With underfloor heating precluded by the 750mm of woodchip that covers the enclosure's concrete floor and serves as a natural floor for the lemurs, this was again the perfect match for the zoo's needs.

Additional shelf and anti-finger rails were installed above the skirting boards to allow the heat to be distributed without the risk of damage by the animals.

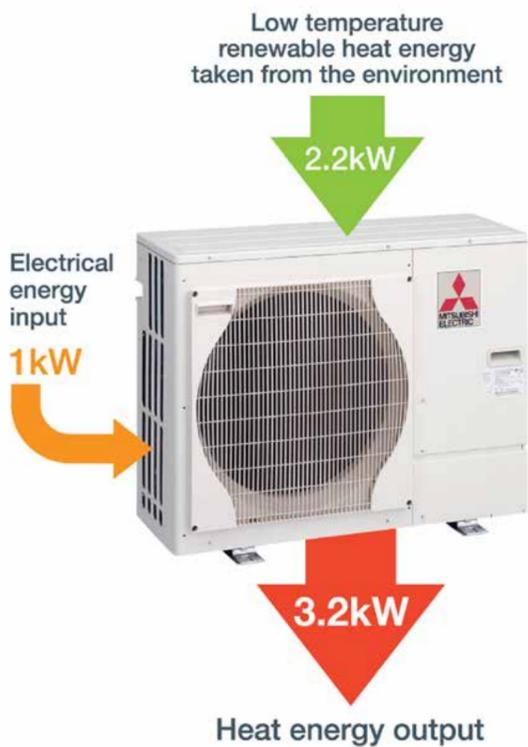
The thermostat installed in the Keeper's area enables the temperature of the enclosure to be raised as necessary in the event of the animals falling ill.

**Result:**

The integration of heat pump technology has allowed Bristol Zoo to meet the precise requirements of the lemurs in a manner which is both controllable and energy efficient.

"We were delighted with the work by Gregor Heating. They understood exactly what was required and delivered the perfect renewable solution for our lemur exhibit. Gregor also understood our requirement to blend in with the natural environment and provided the perfect solution for the unit installed. We couldn't have asked for more."

Rebecca Cole, Exhibit Development Manager at Bristol Zoo Gardens



**Solution:**

- Mitsubishi Ecodan PUHZ-W50VHA2 air source heat pump
- Perimeter Heating System for heat distribution
- Heating controls.

