

Chester Zoo

Chester Zoo, which opened in 1931, operates over a total of 125 acres of land and is home to well over 30,000 animals from more than 500 of the world's rarest species.

With over 1.4 million visitors a year, it is a major UK visitor attraction. The £40 million 'Islands' project, covering 5.5 hectares, has sought to replicate the Indonesian habitats of resident species and represents the largest and most ambitious project undertaken at any British zoo.

Customer Requirements

Turnbull & Scott was approached to explore heating options for its spectacular new "Islands" attraction.

- The Zoo required a heating system for this new tropical environment that would maintain the atmosphere in the exotic animals' habitat at 45°C and 90% humidity to which they are accustomed.
- A key requirement was that the solution needed to blend in with the overall structure which included sections with 'curved' walls.

Custom Designed 'Curved' Finned Tube Heating System

Turnbull & Scott provided a custom designed 'curved' spiral wound Finned Tube (aka gilled tube) low pressure hot water (LPHW) heating system which was manufactured at its factory in the Scottish Borders.

- Spiral or helically wound Finned Tube is produced by winding a specific width of metal strip around the length of a metal tube with pre-determined gaps between the spirals.
- This creates a series of 'fins' which extend the surface of the tube through which hot water circulates, providing a much larger surface area for the circulating air to pick up heat energy and carry it around the building by means of natural convection.
- A particular challenge for this project was the need to curve the Finned Tube to mirror the shape of the building walls. Manufacture of curved Finned Tube however is a Turnbull & Scott speciality.
- The carbon steel Finned Tube was galvanised to resist corrosion and facilitate the special cleaning requirements of dealing with 'jungle' debris.
- Finned Tube is a rugged and highly durable low maintenance product which provides easy access for inspection and cleaning.



For more information and to discuss your project, please contact us on 01450 372053 or visit www.turnbull-scott.co.uk