



**A ‘chimp proof’ heating solution for Monarto Zoo’s endangered species, that also provides exceptional energy-efficiency and reliability**

**Project Address:** Old Princess Highway  
Monarto, South Australia

**Commercial Contractor:** Carrier Australia

**Modernisation and Controls Manager:** Peter Lane

**Monarto Zoo is a world leader in animal conservation. Their chimpanzee exhibit in South Australia houses a troop of eight with a large open space enclosure that is exposed to the seasons all year round. AIRA’s gas heaters are keeping the chimpanzees comfortable in the cooler months, while also adhering to the park’s commitment to the environment.**

**Project requirements**

Monarto Zoo is a 1,500 hectare open range zoo located approximately 70km’s from Adelaide’s CBD that is managed by the Royal Zoological Society of South Australia. Ensuring the health, safety and wellbeing of the chimpanzees was the main project requirement, specifically during colder months. This required a specialised heating solution, something that historically has been difficult to do, due to a number of technical and primate issues.

Chimpanzees are very inquisitive, so to ‘chimp proof’ the heating solution against animals that are highly mobile, intelligent and incredibly strong, requires engineering excellence and ingenuity. In undertaking this project, the goal was to also ensure even heat distribution, while preventing the chimps from harming themselves.

**“AIRA provided an outstanding solution to support our global status as an animal conservation organisation. The number one priority is the health and wellbeing of the chimps. So, to have a highly specialised solution for our unique requirements – which uses less energy, is easy to maintain and removed problems we had in the past with other systems – has exceeded our expectations. Reduced energy use also fits our commitment to the environment, proving that you can heat a large area, but do so with minimal impact.”**

- Wayne Yorath, Sustainability Officer, Monarto Zoo

[aira.com.au](http://aira.com.au)

## Solution

AIRA delivered a gas heating solution that has proven to be cheaper and more reliable to run than the previous electrical systems. The AIRA unit provided was the Dravo DU12 gas heater, return air indirect fired gas, with the optional LPG and optional blower and a modulating control.

The unit was purpose built to work in the chaotic and unpredictable environment of a large open chimp enclosure. One clever example is the baffle design protecting the gas flame, that still enables warm air to be effectively distributed.

The Dravo gas heater series can be coupled with an energy recovery system or an evaporative cooler to create a complete energy-efficient heating, cooling and ventilation system. It comes in a range of standard and optional sizes to meet project requirements.

## Results

The result has been an improvement in animal comfort, translating into a better and consistent viewing experience for visitors. This is an essential part of the zoo's requirements as it is a critical way to generate the funds needed for the enclosure.

The AIRA Dravo DU12 solution also uses less energy and has reduced operating costs (maintenance related) than previous heating solutions in the chimpanzee enclosure, thereby exceeding the zoo's expectations.

Dravo Gas Heater Specifications		
Model	DU12	
Input (MJ/hr)	127	
Output (kW)	28.4	
Air quality and pressure drop at 18°C	L/s	1400
	Pa	180
Size	610 (W) x 1013 (H) x 850mm (L)	
Weight	98kg	
Flue outlet diameter	152mm	
Outlet spigot	528 x 437mm	
Motor	1.5 kW 2 speed	
Power (at max airflow)	240 v 50 hz 1 ph	
Gas pressure	1.1 - 3.5 kPa	
Burner	Atmospheric ribbon	
Heat exchanger	Stainless steel	
Cabinet	Marine grade aluminium	
Control	Electronic modulating	

Only the one Dravo model is shown here. For full range details and specifications please contact Seeley International.



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