





# Vortex Centre Gippsland Water Factory

The Vortex Centre houses office and laboratory functions and acts as a visitor centre for the new Gippsland Water Factory located in regional Victoria. Kane Constructions completed this highly unique $5 million project in 2010.

The structure is built over an artificial lake that delivers cooling to the building together with other passive environmental measures, including natural ventilation and thermal convection. Due to the stable temperature of the lake, the building delivers a very low energy summer outcome. Cool water from the bottom of the lake is passed through heat exchangers, delivering cool air into the interior.

At night, the lake water is pumped over the roof to be cooled for use during the day. In winter, waste heat from a biogas powered cogeneration system will be used to heat the interior. The combination of these design principles ensures the Vortex is a low user of natural gas and power from the electricity grid.

At the entry to the Vortex, transparent pneumatic ETFE cushions incorporate variable skins allowing the façade to be tuned, admitting or excluding sunlight for different seasons and daily conditions.

**Kane Constructions Pty Ltd**
kane.com.au

**Client**
Gippsland Water Factory

**Consultants**
DesignInc

**Location**
Victoria

**Value**
$5M