Kirk

WAF Completed Buildings: Display

Mon Repos Turtle Centre

Architect	Kirk	**Lead Architect Name**	Richard Kirk
Architect Country	Australia	**Client**	Queensland State Government
Project Completion Date	01/11/2019	**Status**	Entrant, Shortlist
Project City	Bundaberg	**Project Country**	Australia
Category	WAF Completed Buildings: Display	**Category Sponsor**	
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WAF Year	2020-2021	**Location**	Google map
Image Credits	Scott Burrows		

The Mon Repos Turtle Centre, in Bargara Queensland is a modestly scaled research and visitor centre sited adjacent to a beach within the Great Barrier Reef conservation park.

Mon Repos Turtle Centre utilised locally grown and fabricated spotted gum timber glulam structure that is protected by a bespoke folded copper cladding. The folded cladding permitted the air movement needed for natural ventilation whilst avoiding any artificial light spill light spill at night - artificial light adversely impacts the navigation senses of the turtle hatchlings as they make their journey to the waters edge.

The conceptual framework of the project was a search for an authentic site response in the building form, spatial experience and materiality. The design drivers of the project were so compelling we saw the poetic emerging from a deliberate focus on circumstance of place and purpose of the project.

Mon Repos beach is the most important turtle nesting ground in Australia hosting key research into the endangered loggerhead turtle and the impacts of climate change for more than 40 years. The project scope also included master-planning of the entire beach side environs to manage vehicle and pedestrian movement within the sensitive coastal landscape.

The building operates as an interpretive centre during the day. During the turtle nesting season, it is a briefing hub for up to 300 visitors each evening. Environmental protections require visitors to be guided to and from the centre to the beach in dark night-time conditions via a set of pathways and boardwalks to safely connect to the beach. The program for the building is simple - a large gathering space "the courtyard", an interpretive space with an immersive theatrette, and research and office spaces.

We created a structure that underscored the critical and enduring research work occurring at Mon Repos.

The structure and building fabric was required to be designed to withstand the corrosive sea air and seasonal cyclones for a lifespan of in excess of 40 years. A further complexity of the project was that it had to be prefabricated to enable to be constructed in a short time between turtle nesting seasons of 7 months. This lead to the early adoption of glued-laminated timber as the main superstructure. Spotted gum timber was sourced, harvested and manufactured in the region by a locally-owned business in Maryborough, responding to the project funding requirement to support the local economy and industry.

The superstructure is a 9.6M x 9.6M diagrid found to be the most efficient structural design to reduce the overall material use and increase spans between glulam 'tree' columns. The diagrid structure also informed the plan shape, creating a multi-faceted series of triangular folds for protected openings to limit light spill while enhancing the mystery of the arrival experience. The diagrid pattern is celebrated throughout the interior and the diamond pattern implies the intricate patterns of the turtle carapace.

Externally the form is a direct volumetric expression of the mono-pitched diagrid structure. The angular forms are clad in a bespoke folded copper sheeting and where protected, recycled tallowwood cladding and screens. The skin allows the facade to breath while avoiding light spill outside. The building skin will develop a patina over time along with it's surrounding landscape immersing itself into the landscape of grassy, dune forms and trees, ensuring it is a careful intervention to this sensitive and ancient home to the turtles who travel around the world to nest each year in the same place.