

Recycled relic marks Labor's birth



At well over 1000km from the nearest urban centre in Queensland, a newly erected 18-metre square memorial to the Australian Labor Party's (ALP) beginnings in Barcaldine is destined to become a magnet for tourists and political devotees alike.

Known as the Tree of Knowledge, the structure upholds the remains of the ghost gum in the main street that dominated the flat landscape of the town, which legend holds the ALP was founded under in 1891 following the infamous shearer's strike that year.

The winning concept by Brian Hooper Architect in collaboration with M3Architects started with a steel framed structure to support the preserved remains of the tree incorporating the remaining original branches placed to reflect the original natural form.

A lot of work went into the design for erection of the supporting structure designed by engineers, Bligh Tanner that comprises approximately 85 tonnes of Australian steel supplied by OneSteel.

A replacement tree canopy was provided in relief by the use of over 3600 hanging timber slats all obtained from recycled power poles and are Forest Stewardship Certified (guaranteed sustainable, renewable or recycled). The roof is glass with stainless reflectors to maximise the effect of sunlight through the canopy. Logs hang from the ceiling of the frame imitating the original canopy of a tree and charcoaled external timbers create a 'veil' around the dead tree.

A highly collaborative approach between architects and the structural engineer was critical during the design stage to ensure that the steel skeleton was minimised to enhance the visual effect.

The remote location of the memorial made fabrication, transport and erection of the steel a major consideration of the design process. All steel was shop detailed and fabricated in Toowoomba by AG Rigging and Steel.

The primary structure consists of a pair of 450 square fabricated columns at each of the four corners. These fixed-base columns support a series of prefabricated steel trusses consisting of light 200UB and 100UC sections. These highly efficient trusses minimised weight for transport and erection, being largely hidden from below by the timber canopy overhead.

The timbers are supported by square rods at the base with a round rod saddle and at the top via a machined threaded end. The square rod is supported through a laser cut square hole (to limit rotation of the rod) and lock nuts. The rods were cut to varying lengths to form the relief canopy shape of the tree.

Erection was facilitated by using corbel connections between trusses that helped ease seating during construction. The use of close spaced ceiling joists for hanger support ensured safety during construction.

The coating system had to provide long life as well as the ability to be aesthetically touched up, but also tough enough to withstand the rigours of long distance transport. The selected system of Altex High Build Polyurethane successfully delivered on all accounts.

Another factor that complicated erection was that the structure stands within one metre of a working railway station and located in the main street of the town.

"The primary structure consists of a pair of 450 square fabricated columns at each of the four corners. These fixed-base columns support a series of prefabricated steel trusses consisting of light 200UB and 100UC sections. These highly efficient trusses minimised weight for transport and erection, being largely hidden from below by the timber canopy overhead."



This required careful coordination between railway staff, Barcaldine Regional Council, the general public and the builders, McNab Constructions to ensure safety of all involved onsite staff whilst erecting the steelwork.

The A\$4.2 million memorial was commissioned by Barcaldine Council supported by Federal and State Government funding.

Queensland Premier **the Hon. Anna Bligh MP**, who herself has strong links to Australian political history as the great, great, great, great-granddaughter of the original colony's fourth Governor, opened the monument.

"This is an extraordinary landmark. I have every confidence we are going to see people from all over Australia and from the world wanting to come here and visit this unique and very beautiful monument," Premier Bligh said.

At night the memorial is illuminated and creates a popular meeting place for social exchange. The original root ball of the tree is preserved and showcased to visitors through a glass floor panel located under the canopy.

For more information on The Tree of Knowledge please visit: <http://www.environment.gov.au/heritage/publications/about/pubs/national-heritage-tree.pdf>

Project Team

Architect: Brian Hooper Architect in collaboration with M3Architects

Structural Engineer: Bligh Tanner

Building Contractor: McNab Constructions

Steel Detailer and Fabricator: AG Rigging & Steel

Rigger: PK Rigging

