

This case study was written at the time when OneSteel was part of BHP. In that context, in some instances within this case study, reference may be made to BHP.

THE POINT

If you've been to Albert Park in Melbourne lately, home of the Australian Grand Prix, you will have noticed an enticing new structure located on a small promontory at the northern end of the park's lake. Built on such a prominent site, The Point, as the structure has been named, enhances its location by forming an exclamation mark at the end of a row of refurbished boat sheds along Aquatic Drive.

The Point is a two-storey mixed-use building which came about after the park's manager, Melbourne Parks and Waterways (MPWW), called for expressions of interest for the site. The site had been earmarked for a hospitality based development as part of the rejuvenation of Albert Park. The ground floor of the building incorporates a cafe, bar and office accommodation for MPWW. Upstairs is a restaurant and function room.

Maddison Architects were engaged in April 1995 to design, document and administer the construction of the building with a completion



deadline of February 1996. To meet these tight time constraints, a steel framed building was selected and a fast-track construction process was adopted, requiring close liaison between builder and architect. The project was successfully completed on time and on budget and it won the prestigious 1996 Australian Institute of Steel Construction award for architectural steel design in Victoria.

Architecture

A two-storey curved facade of tinted glass provides sweeping views of the water and city skyline, with internal mullions to enhance the horizontal sweep of the glazing. A steel frame was used as the structural system and exposed where possible to create a modern building which is dramatic due to its expressed form.

Steel is painted a deep blue-black to further enhance the dramatic effect desired by the architect.

"We were conscious that we shouldn't make the building look like a meccano set. The members required clever detailing to ensure clean lines of exposed sections – they had to be bolted at hidden locations to give the impression of a fully welded structure. Chapple Bros Engineers and their steel detailer did a first class job with the fabrication which made the erection speedy", remarked Peter Maddison.

There is an accompanying 11 metre high steel tower which the public can use as an observation deck to gain panoramic views. The tower is used by officials during the Grand Prix because of its vantage point.

Structure

Various alternatives including insitu concrete, precast Hollowcore, Transfloor and steel profile decking on steel beams were investigated by the structural engineers Gamble and Cosentino. Jim Cosentino said, "The shape of the floor plan meant insitu concrete was too expensive and a precast floor system was not viable. Steel columns and beams and Condeck HP proved to be the most viable option not only because of economy and consistency of pricing, but also for speed of construction."

A steel decking and steel frame system not only enabled rapid construction, but also enhanced the opportunities presented by the unique site by accommodating the architect's requirement for a lightweight open structure with expressed structural elements.

The radial beams in the curved part of the building are 410UB60 with shear studs for composite action, and a tapered cantilever over the 219.1 x 8.2 CHS columns. The glass curtain wall and external balcony are supported on these cantilever sections with the internal columns allowing the curved glass wall to become a seamless and continuous feature. Curved circumferential beams were used to support the curtain wall and balcony. The rectangular part of the building uses 460UB74 primary beams and 360UB45 secondary beams. Composite slab and beam construction has been used throughout with propped Condeck HP steel decking supported on steel beams with shear studs.

Conclusion

The park and lake have been enhanced by this uncompromisingly modern steel building with its expressed steel structure wrapped in a skin of glass. The informal and open look of the building provides a welcome feel which has proved to be very popular with the public.



Client:	Leawarra Falls
Architect:	Maddison Architects
Structural Engineer:	Gamble and Cosentino
Builder:	Kane Constructions
Steel Fabricator:	Chapple Bros Engineers (building) Wilby Tower (tower)
Steel Distributor:	Union Steel