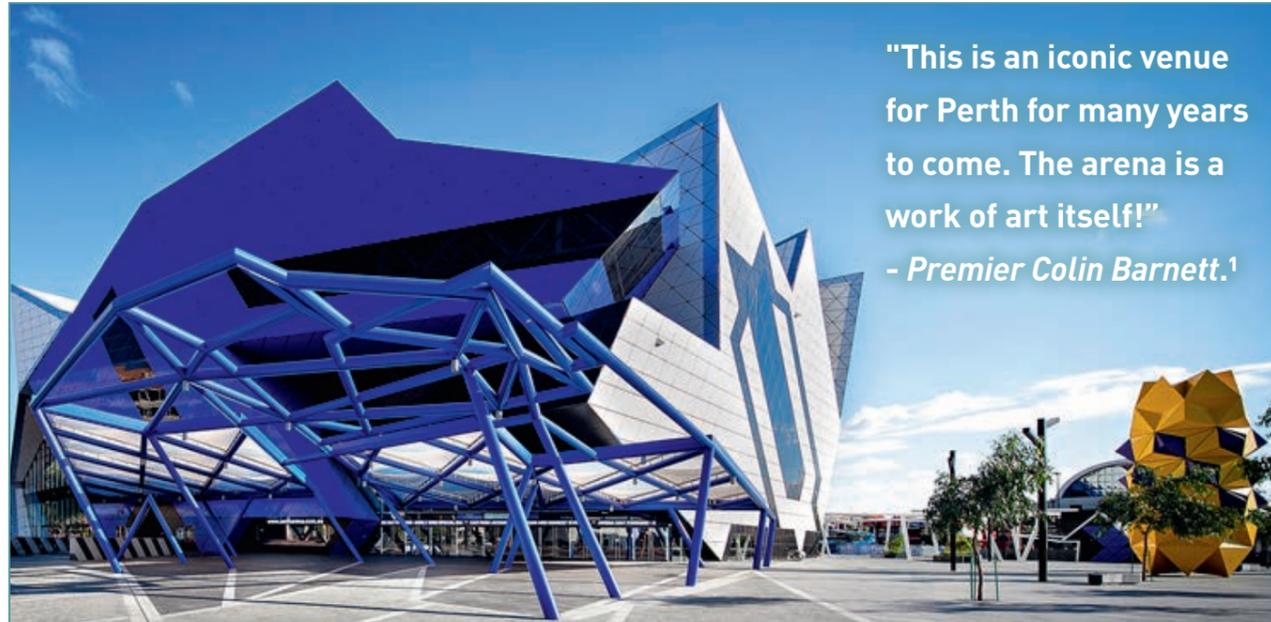


Perth Arena

Perth Arena is Western Australia's proud new home of entertainment, music and sports.



"This is an iconic venue for Perth for many years to come. The arena is a work of art itself!"
- Premier Colin Barnett.¹

The \$548M arena is located on Wellington Street, near the site of the former Perth Entertainment Centre, and was officially opened on 10 November 2012. Twelve months from its opening, it was awarded with a string of accolades taking the top prize at the 2013 Western Australia Design Institute of Australia (DIA) Design Awards, top honours at the Australian Institute of Architecture awards in Perth (George Temple Poole Award) and not to mention the Sir Zelman Cowen Award for Public Architecture, the most prestigious award for an architecture project at the prestigious National Architecture Awards 2013.

The venue has 36 luxury appointed corporate suites, a 680-bay underground car park, five dedicated function spaces and space for touring trucks, which can drive directly onto the arena floor. The stadium's very flexible design allows for crowds of up to 12,000 in general admission concert mode and up to 15,500 in tennis mode.

Perth Arena was designed by Melbourne-based design house A-R-M Architecture. The striking building design was inspired by the 12-sided Round House in Fremantle and the 209 irregular shaped pieces of Christopher Monckton's Eternity

puzzle. "This landmark building has been designed to provoke symbolic interpretation, create direct visual responses from all approaches, and become an integral part of the city's overall urban design and architectural strategy" said Design Director Howard Raggatt.¹

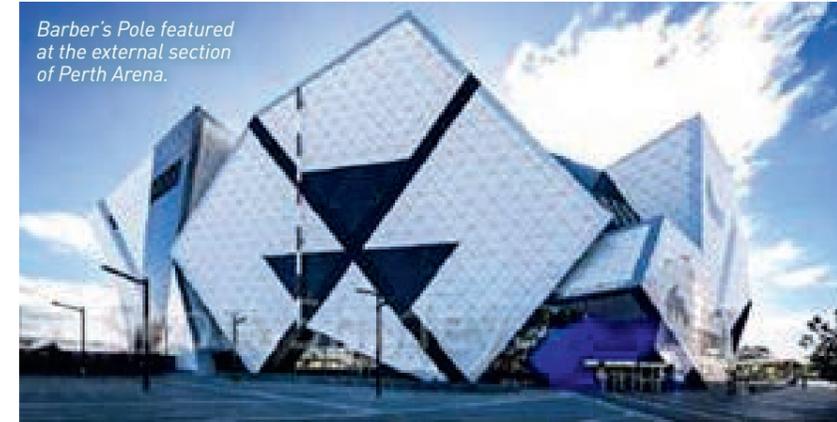
The arena can be closed down for an intimate concert with 3000 people, utilizing Vector Lifting's Retractable Roof. The moving roof weighs 320 tonnes and closes in 7 minutes, with a state-of-the-art tracking system.



Complex structural steel skeleton during the construction stage of the Perth Arena.

Made from two separate roof panels, each panel is controlled independently to provide shade for spectators, protect the bowl from weather and to track the sun to prevent shadows being cast on the court.

The very complex structural steel skeleton for Perth Arena consumed 40,000 litres of protective coatings produced by International Paint (IP). The off-site blast cleaning and painting of the structural steel for this project was conducted by Ferro-Clean Pty Ltd, a Perth-based company established



Barber's Pole featured at the external section of Perth Arena.

almost 50 years ago, which specializes in applying protective coatings to steelwork for projects in Infrastructure, Mining and Oil & Gas.

The steelwork was fabricated locally, and was made in sections to facilitate transport and construction. The two 130 metre long 'mega-trusses' weighed 400 tonnes each and consisted of 32 K-shaped sections, designed to support the main roof structure, which weighed 2200 tonnes all up. The roof was built on the ground, and then hoisted 22 metres up to its required position with eight hydraulic jacks, where it remained for three months while the supporting columns were installed. It is understandable that given the nature of the building, some of the steel sections were very complex pieces and required expert applicators to ensure they were completed to standard.

One of the highlights was the 'Barber's Pole' – A 25 metre long pole which marks the Western Australian border on the Arena's Australia-shaped side. The pole was split in two sections, due to its length, and painted with red and white stripes. The intricate pipework at the main entry to the arena was also a challenge, due to its size and irregularity. However the result is very impressive – when viewed from a certain spot (marked with a brass tile) the pipework forms an outline of the building, following the perimeter and internal lines very accurately.

Understanding the project's necessity for a high technology coating with excellent long term colour and gloss retention properties, the IP engineering sales team specified a combination of inorganic zinc and epoxy zinc for internal steelwork, including the roof frames and cat-walks, which are visible from the audience area of the building's

internals. This used approximately half of the protective coatings painted by Ferro-Clean – over 20,000 litres. The external or exposed steelwork was then coated with Interplus 356, and the visible portions then topcoated with Interfine 979 polysiloxane, appropriately named 'Perth Arena Blue'.

Ferro-Clean's CEO commented, "During the colder winter months of the 3-year construction period, paint curing times were a challenge. In order to have the mega-truss roof frames ready for permit transportation into the inner-city site, IP's low temperature rapid cure paint made it possible to meet the very tight construction deadlines and therefore we were able to maintain a high level of throughput at our multiple facilities". IP Area Manager Bob Parry is extremely satisfied with the high performance acrylic polysiloxane finish on the exposed surfaces of the megastructure, and their long lasting appearance will truly complement this iconic building for years to come.

Another interesting feature of the Perth Arena project is a totem tower, designed by Perth-born artist Geoffrey Drake-Brockman. Affectionately nick-named as 'The Pineapple' by the people of Perth, the tower is situated on the eastern side of the Arena. It stands at 10.5 metres high and 3.5 metres in diameter, with some 108 moving elements. Its moving panels are programmed to open and close like flower petals in response to people walking past and it shoots geometric laser projections onto the wall of the Arena at night, visible from several parts of the city.

The centre section holds a laser projector, and the triangular panels open up and undergo a colour change to violet. This laser tower artwork created by Living Iron, was painted by

TLC Surface Treatment in Welshpool. The tower used multiple triangular aluminium panels, and was painted with Intergard 269 epoxy primer and Interthane 870 high build acrylic polyurethane for the topcoat.

The Totem pole in the first stages of painting had been a challenge to ensure a suitable system could be applied not only to protect but also to give a smooth finish as the lower section is very visible to the public.

TLC painted 12-15 of these triangular sections at any one time until completion which spanned over a 3-month period. The Pineapple changes colour and shape as it moves. Aluminium panels coated in yellow and violet paint open and close creating a constantly changing appearance.



Pineapple changes colour as the segments open and close.

Truly an iconic feature, the Perth Arena has sealed itself as Western Australia's landmark of live entertainment, music and sports. The breathtaking design, large crowd capacity and world's-leading technology is no wonder the arena is ranked no: 22 in the world's top 200 venues by respected live music industry magazine Pollstar.

Submitted by Bob Parry and Jasmine Moey of International Paint

¹ http://www.a-r-m.com.au/projects_PerthArena.html