

■ from humble beginnings . . .

The first known use was in 1904 for Sydney Harbour's Bradleys Head lighthouse which is still in use today. This was followed by many other marine structures, including precast sea walls and pontoons. What is thought to have been the first application of precast formwork was in Jones Bay wharf in 1915. The piers here were over 15 metres long, and pipes were used as formwork for insitu concrete piers. In 1910, the centrifugal spun reinforced concrete pipe – a world-first – was invented by two brothers, WR Hume and EJ Hume, who took out world patents on it. The process and practice of pipe spinning was widely adopted throughout Australia, Europe, Asia and the Americas.

The explosion in demand after World War II saw high rise public housing being constructed in precast, primarily in Melbourne and Sydney. This activity extended to the 1970s in precast loadbearing panel construction up to 30 storeys, as well as in detached dwellings. Prestressed concrete bridges were also in demand across the country with an early example at Tenthill Creek near Gatton, in Queensland. As commercial development proceeded, the precast industry expanded to supply architectural precast cladding to offices and university buildings. Cladding and framing in precast has been a major feature of construction ever since and precast flooring products enjoy wide acceptance in all States.



Box Hill Medical Centre, Vic



Azzure Apartments Mount Pleasant, WA

Why has precast been chosen in these instances?

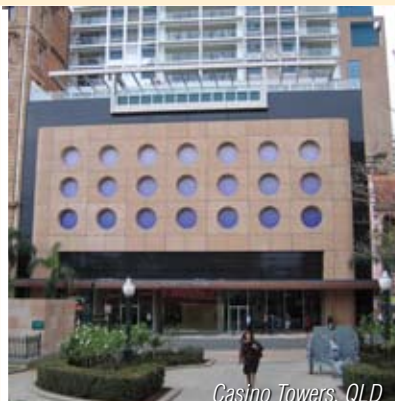
The benefits of using precast have been long known by architects and engineers, as well as by property developers and construction companies. These groups are increasingly enjoying the design freedom, simplicity and cost savings associated with using precast. As a consequence, precast is increasingly being demanded as the material of first choice in construction by the decision makers.

Project time savings of up to 30% are indeed not something to be overlooked. Off-site manufacture under controlled factory conditions means that problems associated with lack of site space, noise, wet weather and waste disposal are no longer issues for the constructor. Quality tested, precast components ensure a high quality and durable product with a high level of dimensional accuracy, which in turn provides for quick, easy erection. Minimal propping for flooring allows subsequent trades earlier access and minimises safety issues.

With more and more designers adopting the methodology, incorporation of precast concrete into a project can be straight-forward. Early involvement with the precaster is important to achieve the best outcomes. Once delivered to site, a crane will be required to erect the precast components – something that should always be considered in the planning process. Competent, experienced precast erectors operate throughout Australia to service the precast concrete industry.



Campus Living, QLD



Casino Towers, QLD



Ephraim Island Residential, QLD



National Precast Concrete Association Australia

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Golik Precast Ltd (Hong Kong) ■ 852-2634 1818
Halfen-Deha Pte Ltd ■ [03] 9727 7700

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National Precast Concrete Association Australia

1/184 Old Canterbury Rd
 Summer Hill NSW 2130 Australia
 PO Box 396 Summer Hill NSW 2130
 Tel [02] 9799 3421 Fax [02] 9799 8423
 Email: info@npcaa.com.au
 Executive Officer – Sarah Moore
www.npcaa.com.au



Burwood Car Park, Vic



Artarmon Storage Facility, NSW



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Precast Industrial Buildings

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- The detailing of the precast panels.
- The manufacture of the precast panels.
- The safe erection of the precast panels.
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 Tuesday 5 June 2007
 Hospitality Suite 4
 Sydney Convention & Exhibition Centre

Cost:

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\$190.00 (GST inclusive)

For bookings received by 18 May 2007.

(fee includes morning and afternoon tea, lunch and handouts, and an electronic copy of the Precast Concrete Handbook and an electronic copy of the new NPCAA Panel Detailing Manual)

To register, go to www.npcaa.com.au/html/EDUCATION4.html (builders) or www.npcaa.com.au/html/EDUCATION5.html (engineers)

PRECASTER

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To magnificent proportions...

Evidence of precast concrete is all around us. The Sydney Opera House could not have been built any other way. Public buildings such as Parliament Houses in Sydney and Canberra, the Adelaide and Perth Convention Centres, Melbourne's GPO and Victorian Museum are fine examples. The Woolloomooloo Railway Viaduct and the Gladesville Bridge in Sydney and the O-Bahn track system in Adelaide are innovative infrastructure uses.

Today, precast concrete in Australia continues to live up to its proud history. The use of precast in the majority of modern structures is testament to the huge contribution that the precast industry is making to Australian construction. There are a huge variety of architectural, infrastructure and drainage products being produced by NPCAA Members throughout the country.



Woodside LNG Jetty Dampier, WA

"It's difficult to find any modern structure in this country which doesn't use precast."



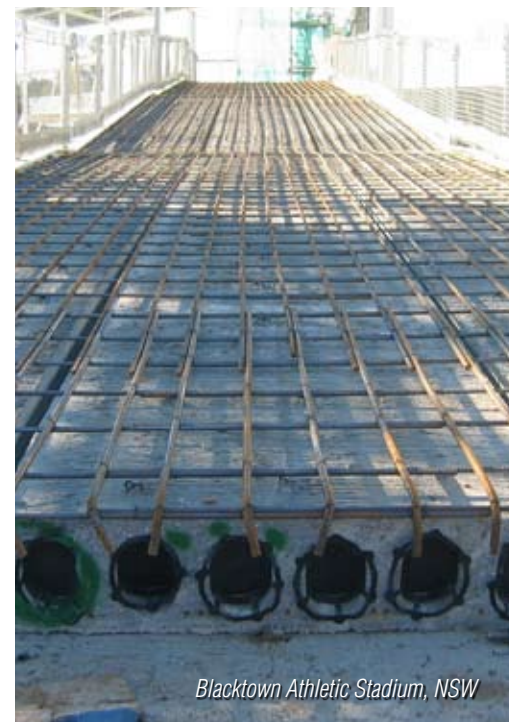
UWA School of Business Crawley, WA



Royal Hobart Hospital, TAS



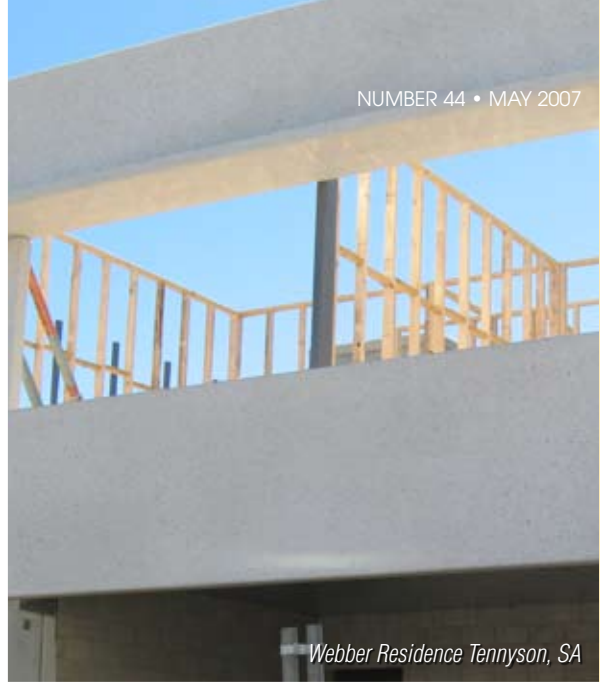
Retaining wall for Roe Hwy at Karel Ave, WA



Blacktown Athletic Stadium, NSW



Watergardens Town Centre, Vic.



Webber Residence Tennyson, SA



Waikiki & Rockingham Stations, WA



Mitcham Office & Car Park Development, Vic



Westmead Bridge, NSW



District Court Building Perth WA



Prominence Apartments, NSW



The Wave Gold Coast, QLD



Mulgrave Office & Car Park Development, Vic



Toongabbie Bridge, NSW

current projects



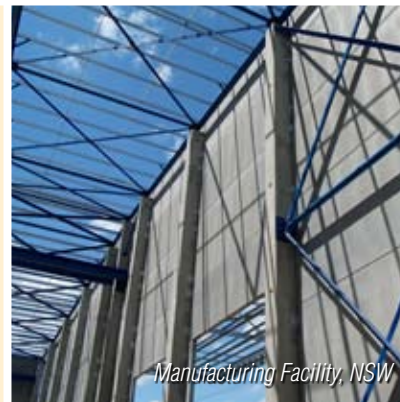
Forensic & Prison Hospital Long Bay, NSW



IKEA Megastore Innaloo, WA



Gold Coast Desalination Plant, QLD



Manufacturing Facility, NSW



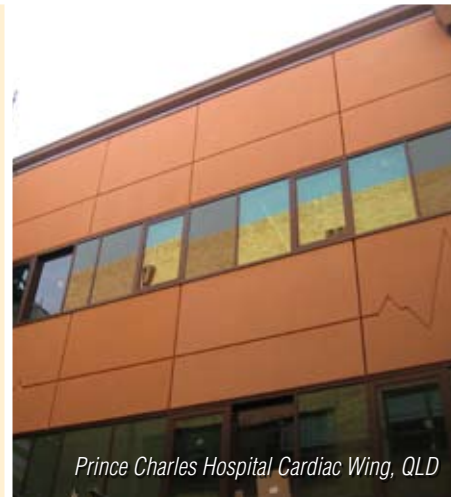
Lane Cove Tunnel Arches, NSW



Network 10 Adelaide, SA



Roe Highway Stage 7, WA



Prince Charles Hospital Cardiac Wing, QLD

A growing industry

Precast concrete has played a key role over the years in the development of the civil engineering and building construction industries. It has played a large part in delivering productivity improvements and improved quality of structures, as well as the achievement of architectural finishes that are impossible to achieve with insitu or on-site tilt-up methods.

The development of the precast industry in Australia has been influenced by many factors. Perhaps the most important has been the evolution of cranes, especially mobile cranes, which are now very transportable and have very large lifting capacities. As well, better roads and road transport rigs have made larger loads and greater delivery distances economical.

Adidas Building, VIC

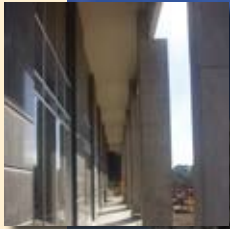


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Baulkham Hills Shopping Centre, NSW

Capitol Apartments, ACT



Mitcham to Frankston Hwy Retaining Wall, VIC

Leach Highway, WA



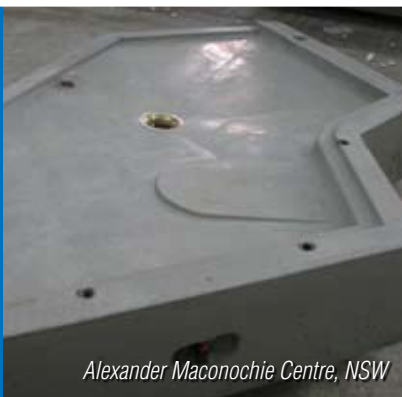
Green Bridge (Elanor Schonell Bridge), QLD



Parramatta Justice Precinct, NSW

Precast concrete is used for:

- Bridges, highways, tunnels and retaining walls
- Wharves, jetties and other marine structures
- Foundation piling
- Drainage products including pipes and culverts
- Office buildings, hotels and shopping centres
- Hospitals, libraries, casinos, stadia and universities
- Factories and warehouses
- Townhouses and apartments
- Multi-level car parking structures
- Correctional facilities



Alexander Maconochie Centre, NSW



Place on Brougham, SA