



PRECAST FAST-TRACKING RAIL PROGRAMME

Project: Merinda Park Station
(Cranbourne Line Upgrade)

Location: Merinda Park, Victoria

Master Precaster: Hollow Core
Concrete

Builder: South Eastern Program
Alliance, Laing O'Rourke (Principle
Contractor)

Consulting Engineers/Architects:
Jacobs

Precast was used extensively above ground as well, with 80 ramp wall panels and 42 rail platform cast using an almond pigment and featuring a horizontal bamboo pattern. Ramp panels tapered in different directions and mitred seamlessly into adjacent elements at varying angles, creating a magnificent geometry.

While aligning the geometry was a challenge, the most architecturally spectacular part of the project was the station's 'Pyramid'. Appearing simple at face value, the two main panels of the 'Pyramid' comprised 27 and 13 faces. To ensure a seamless process, the Alliance proposed that Hollow Core guide the structure's design using

their expertise in 3D modelling and precast construction.

According to National Precast's CEO Sarah Bachmann, the impressive outcome and in particular, the exquisite quality that was achieved for Merinda Park Station was only made possible by the Master Precaster's design expertise and technical manufacturing capability.

"A precaster of this calibre who manufactures in an under-cover, controlled factory environment with extensive quality and safety management procedures in place, naturally delivers an outstanding result for the client and end-user alike," says Ms Bachmann.

Precast concrete was used extensively in Victoria's new Merinda Park Station to eliminate unwanted delays to the public rail network, and it resulted in the project being completed a year ahead of schedule.

The new station – part of the Cranbourne Line Upgrade in Victoria's Level Crossing Removal project – was constructed by the SE Program Alliance and has delivered eight new kilometres of new track and 50 new weekly train services.

Precast walls, floors, beams, coping stones, lift pit boxes, and stairs were manufactured and installed by National Precast Master Precaster Hollow Core Concrete.

Constructed over just a three-day weekend period, the bridging component that spanned over the underpass used heavily reinforced precast deck slabs that were designed to take train traffic loads. Using precast meant that site access wasn't cut off for weeks and enabled the Cranbourne line to reopen on the Monday Morning in time for the rush hour.





COBURG STATION PART OF AWARD-WINNING PRECINCT

A stunning precast concrete façade that adds depth to the landscaped site and exemplifies the changing daylight conditions, has contributed to the project winning a highly sought-after Victorian Government award.

Coburg Station – with its precast façade manufactured by National Precast Master Precaster Advanced Precast – is a part of the Bell to Moreland project in Melbourne's north. The project is a part of the Victorian Government's Level Crossing Removal Project and was recently awarded a key prize at the Victorian Premier's Sustainability Award 2022.

The recently completed project has been awarded the *Industry Leader Award* in the Premier's Sustainability Awards – Sustainable places and destinations category.

As a part of the Project, four level crossings were removed, two kilometres of rail between Bell Street (Coburg) and Moreland Road (Brunswick) were elevated and two new stations were built at Coburg and Moreland. In addition, 2.5 kilometres of open space were created to encourage active transport, innovative landscaping to encourage biodiversity, and co-design for better place-making.

The new Coburg Station features a stunning diamond-stamped façade manufactured with a white oxide mix. Advanced Precast has implemented the use of custom form-liners to achieve the complex embossed façade panels for the building.

Designed by Project architect Wood Marsh, the textured façade changes the building's appearance as it highlights the differing light conditions throughout the day as the sun angle changes. The panels breathe new light into the space, offering a bright and welcoming appearance to commuters.

The Bell to Moreland project incorporates a variety of sustainable features such as energy and water monitoring systems, solar panels at Coburg Station, water-sensitive urban design, and Woody Meadows planted with Australian natives.



KEEPING PRECAST CLEAN JUST GOT EASIER

A new range of revolutionary coatings that mimic how Mother Nature self-cleans surfaces, are now available from National Precast Supplier member ECOTONE.

Longstanding National Precast member ECOTONE – previously known in Australia as Nawkaw – has been supplying staining products to the precast industry and has extended its product range to include protective coatings with multiple environmental benefits.

National Precast CEO Sarah Bachmann says that the company's new product line ECOCLEAN offers functional benefits to precast both internally and externally. Internally, the products clean surfaces to reduce Sick Building Syndrome and purify the air we breathe.

Externally, they have self-cleaning properties to reduce cleaning, maintenance and replacement costs. By protecting against carbonation, they also preserve the as-new look of the precast. Precast concrete with these coatings also helps to reduce airborne pollutants.

"These clever coatings add huge value to precast making it even more of a sustainable solution for our built environment," Ms Bachmann says.

The self-cleaning coatings add to the myriad of precast's sustainability benefits including:

- Use of local and recycled materials;
- Lead to better quality systems in the factory;

- Improved site safety due to less clutter;
- Minimal waste due to factory waste being recycled;
- Faster construction delivering economic benefits;
- Locally supplied to support Australian communities;
- Improved durability of structures because of better quality manufacturing procedures; and

- Minimal maintenance required with thermal efficiency.

These revolutionary coatings are being used in a wide range of precast project applications, from the ANZAC Memorial to the Parramatta Leagues Club Carpark, to schools, universities, clubs and houses. More information can be obtained from National Precast's website:

www.nationalprecast.com.au

