New modules will help to ensure best practice for project delivery incorporating precast elements.

Image: National Precast

CLOSING THE KNOWLEDGE GAP

SARAH BACHMANN, NATIONAL PRECAST EXECUTIVE ADVISOR, WRITES ON HOW PRECAST TRAINING IS STEPPING UP TO ENSURE THAT THE SECTOR CAN CATER FOR FUTURE INFRASTRUCTURE DEMAND.

Demand for precast knowledge is only set to increase, the result of an unprecedented national infrastructure spend.

Australia is in the middle of a once-in-a-generation infrastructure build. Projects like the VIC Big Build, North East Link, Suburban Rail Loop, Western Harbour Tunnel, Sydney Metro, Inland Rail, and the 2032 Brisbane Olympics are all underway or ramping up. Billions of dollars are also being invested in hospitals, ports, freight networks, and renewable energy infrastructure.

This $213 billion investment across five years from 2023 to 2028 (*2024 Infrastructure Market Capacity Report, Infrastructure Australia*) is welcome, but it comes with a problem. The demand for skilled workers has hit record levels and labour shortages are already causing delays and driving up costs.

National workforce modelling shows that infrastructure labour demand will exceed supply in the coming years, peaking at levels that some sectors have never before had to sustain. Infrastructure Australia suggests shortages of up to 197,000 full-time workers, particularly in trades and labour roles.

This bottleneck is acutely felt in precast concrete, a linchpin of modern infrastructure delivery. From bridge beams and tunnel segments to noise walls, culverts, platforms, and feature panels, precast is prized for its speed, safety, and high quality.

While much of precast's supply comes from established precast manufacturers, many major civil projects also set up temporary precast yards on site. This typically happens when local industry capacity is limited or when producing certain elements on site delivers improved cost efficiencies.

Either way, these temporary yards face the same challenge as permanent factories: they need workers who understand precast and who can work to tight tolerances and high safety standards from day one. In such environments, there's no time for long learning curves. Productivity needs to be high, fast.

Until now, there has been no nationally available education focused solely on precast concrete. National Precast's Micro-Credentials, funded and supported by the Queensland Government, are filling that gap. Not just in Queensland, but right across the country.

The Micro-Credentials are the first industry-developed training program dedicated entirely to precast.

Delivered online, with immediate on-the-job application, the ten short, stackable modules cover the full precast life cycle. These include working with the precast industry, safety and environmental requirements, managing quality and compliance, interpreting plans and documentation, as well as manufacturing tools, plant and equipment.

It also includes reinforcement and cage assembly, mould assembly, casting and demoulding, finishing, curing and remedial work, lifting, handling, storage and transportation, as well as prestressed precast.

Each lesson within a module ends with a quiz, which participants must pass before progressing on to subsequent lessons. Successful completion of a module earns a certificate, and completing all ten results in an industry-recognised Certificate in the Fundamentals of Precast Concrete.

The program equips anyone working in or with precast with comprehensive and essential precast knowledge – whether that be in a permanent factory, temporary yard, or as a professional working with precast.

It's for new entrants, career changers, labour hire workers, and experienced teams who are wanting to deepen their understanding. It is also well suited to overseas recruits who need to hit the ground running with knowledge of local legislation, standards, codes and manufacturing methods.

The new online precast learning offers valuable insight into working in and with the precast industry.

For Queensland participants, the training is free until 30 June 2026. Elsewhere in Australia, it's available for a small fee, making it an accessible, cost-effective solution for precast manufacturers, contractors, labour suppliers, and project owners.

In high-stakes infrastructure builds, there's no margin for error. A lack of understanding of the importance of every step of the process, or a misaligned cage or incorrectly cured panel, can all trigger costly rework, delays, or safety risks. These micro-credentials deliver a consistent, scalable induction into precast best practice, ensuring every worker starts contributing productively, and safely, as quickly as possible.

With labour pressures intensifying, embedding this training into project requirements is a straightforward way to boost capability, safeguard quality, and keep Australia's infrastructure pipeline moving. ■