

National Precast Concrete Association Australia

Curved precision by the coast

The Crowne Plaza Shell Cove Marina in Shellharbour uses precast concrete to resolve the geometric, logistical and durability demands of a complex coastal build.



The hotel's structure and façade feature 668 precast concrete elements. (Image: Advanced Precast)

Along the South Coast of New South Wales, a new landmark has risen as part of the Shell Cove waterfront development. The five-storey Crowne Plaza Shell Cove Marina in Shellharbour stands as the architectural focal point of the precinct, a project that has combined design ambition, technical precision and the enduring strength of precast concrete.

Developed by Oscars Group in partnership with Frasers Property Group and Shellharbour City Council, and constructed by Growthbuilt, the hotel brings a refined coastal character to the region. Designed by DBI Architects and engineered by BG&E Engineering, the building embodies the intersection of considered design and efficient construction.

The hotel's structure and façade feature 668 precast concrete elements supplied by National Precast member Advanced Precast (Australia). The package comprised 183 wall panels, 445 spandrels, including several curved units, and 40 upstands. Each element was manufactured in a factory-controlled environment to ensure dimensional accuracy, consistent colour and a smooth architectural finish. This level of precision was essential in achieving the building's wave-like form while maintaining efficiency and quality.

By manufacturing offsite, the project team maintained quality control, avoided weather delays and reduced congestion on the compact marina site – a demonstration of precast's value in constrained urban environments.

The curved geometry of the façade was inspired by the movement of the nearby harbour. To achieve this, the design and

engineering teams worked with the precast manufacturer to develop custom moulds using 3D modelling and digital templating. This collaboration ensured that each spandrel panel could be cast with the required curvature and alignment tolerances.

Each panel was formed using 40 MPa and 50 MPa concrete, including a 50/50 blend, selected to support durability in a coastal environment where salt exposure and fluctuating humidity are considerations. Reinforcement detailing and lifting points were refined to enable safe, efficient installation on the restricted site. These measures resulted in a system that delivered both the sculptural qualities envisioned by DBI Architects and the performance standards demanded by the project's engineering team.

Delivering this complex project within a busy waterfront setting required detailed coordination. Limited site access and crane positioning posed logistical challenges, while the curved façade geometry demanded exact sequencing during installation. Through early-stage planning and continuous communication between the builder, precast supplier and engineering team, these challenges were carefully managed. Each delivery was scheduled to align with the construction sequence, ensuring minimal disruption to other trades and maintaining a safe, efficient site environment.

Completed in late 2025, the Crowne Plaza Shell Cove Marina represents the growing capability of Australia's precast industry to deliver projects that combine architectural expression, technical discipline and enduring quality. ■■



By Cadell Taye, CEO of National Precast. (Image: National Precast)

