



The project exemplifies the effective use of precast concrete, for more than just infrastructure and transport projects.

BENEATH THE VINES

IN THE ROLLING HILLS OF VICTORIA'S SOUTH GIPPSLAND, A BOLD EXPERIMENT IN ARCHITECTURAL INNOVATION LIES QUIETLY HIDDEN BENEATH THE VINEYARDS.

Partially buried within the earth, a precast concrete arch forms the foundation of a new cellar and tasting space at Gurneys Cider in Foster. Designed, engineered and manufactured by National Precast Master Precaster, Geoquest Australia, the structure redefines winery and cidery design, harnessing civil infrastructure technology to create a monastic, immersive experience, rooted in landscape and longevity.

REIMAGINING INFRASTRUCTURE FOR ARCHITECTURE

The arched cellar is built using Geoquest's TechSpan® system, an advanced precast

concrete arch technology originally developed for bridges, tunnels and mining applications. In a creative collaboration with Gurneys Cider, Geoquest adapted one of its existing arch sets – originally destined for a mine site – to become the structural heart of a space devoted to wine and cider. "When we looked at how our arch system could translate from civil works to architecture, we saw an opportunity to do something both radical and respectful," says Lukas Toman, Regional Manager of Geoquest Australia.

"This project allowed us to test the full potential of engineering-led design, creating a space that is structurally

robust, environmentally discreet and architecturally expressive."

Embedded into the hillside and topped with a fully vegetated green roof, the arch virtually disappears from view. Inside, the structure creates a serene, climate-stable interior. It is ideal for wine and cider maturation and equally suited for tastings, events or even quiet reflection.

STRUCTURAL CLARITY, ARCHITECTURALLY QUIET

The system draws on the geometric logic of the funicular curve, an ancient structural principle used in Roman aqueducts and Gothic cathedrals for its inherent strength.

PROJECT SNAPSHOT

PROJECT: Gurneys Cider Underground Storage
LOCATION: Foster, Victoria
PRECASTER: Geoquest Australia

The result is a soaring, column-free volume capable of spanning up to 21 metres across without internal supports. Built with raw precast concrete, the interior maintains acoustic stillness and thermal stability.

"Stepping inside feels like entering a modern sanctuary," says Toman. "There's a real sense of groundedness, of intention. An architecture of quiet strength."

ENGINEERING A NEW TYPOLOGY FOR WINERIES

Although new to the world of viticulture, Geoquest sees enormous potential for precast arches in rural and cultural architecture. Already proven in large-scale infrastructure projects, such as Australia's



The arch system has been delivered by using precast to create a subsurface storage facility.

"THERE'S A REAL SENSE OF GROUNDEDNESS, OF INTENTION. AN ARCHITECTURE OF QUIET STRENGTH."

largest precast arch on the Wilman Wadandi Highway, the arch system offers speed of installation, reduced environmental impact, and a 100-year design life.

Critically, the company's investment in sustainable construction is helping redefine what concrete can be. Innovations such as steel fibre reinforcement, high-SCM (Supplementary Cementitious Material) mixes, and reduced-carbon concrete have been applied across transport and civil projects like Victoria's Ison Road and now extend to new architectural expressions.

efficiency and design adaptability," she says.

"That makes it a compelling solution for architects and developers seeking permanence, performance and environmental alignment. And this project is an ingenious application of what is ordinarily a system used in civil infrastructure."

According to Bachmann, it also highlights how precast can move beyond pure function, becoming an integral part of the story of a place, while quietly contributing to sustainability. ■

A FUTURE ROOTED IN RESILIENCE

From subterranean barrel halls to bushfire-resilient pavilions, this opens a new frontier in building with purpose.

The peak body for the precast industry agrees. According to National Precast's Executive Advisor Sarah Bachmann, this project exemplifies the flexibility of precast for both function and form.

"Precast concrete offers unparalleled durability, structural integrity, material

Below: The works also exemplify how well precast can be implemented and incorporated into the natural environment.



BUILDING FOR THE LONG TERM

Beneath 70 acres of vineyard at Gurneys Cider, a repurposed arch system forms the foundation for a cellar and tasting space of rare architectural clarity. Designed to blend entirely into the landscape, the structure offers a 21-metre-span precast volume with thermal mass, acoustic softness and a living green roof, an exemplar of low-impact, high-performance winery architecture.