



GEOQUEST

Precast

PRECAST CONCRETE SOLUTIONS

More than just reinforced earth

www.geoquest-group.com.au

At Geoquest, we offer a comprehensive range of precast concrete solutions designed to meet the diverse needs of construction and infrastructure projects across Australia.

Our expertise in precast supports the development and improvement of roads, bridges, railways, mining sites, industrial facilities, military installations, and residential and urban developments.

Whether it is a major infrastructure project or a unique architectural venture, Geoquest's precast concrete solutions ensure quality, efficiency and durability.

www.geoquest-group.com.au/precast

Precast concrete mast, Mounts Bay Road Bridge in Perth



*Case study: Mounts Bay Road Mast
[Read on our website](#)*

Our Precast Solutions

Road Barriers and Parapets

Precast concrete road barriers and parapets are highly durable solutions that are essential for ensuring safety in transportation infrastructure.

These barriers, often used along highways and bridges, provide effective separation and protection for vehicles and pedestrians. Precast concrete parapets serve as protective guardrails on bridge edges, enhancing safety for both vehicles and pedestrians.

Precast barriers and parapets are highly durable, offering resistance to weather, impact and corrosion, which reduces maintenance costs over time. Their design can be customised to meet specific project requirements, ensuring optimal performance and aesthetics.



Westgate Freeway, Melbourne



One Subiaco, Perth

Precast Columns and Piles

Precast concrete columns and piles are vital for supporting loads and stabilising foundations in buildings and infrastructure. These elements are prefabricated under strict quality control conditions, ensuring consistent performance and ease of installation.

Piles are essential for deep foundation work and ground stabilisation, while columns are key structural elements that support and transfer loads within the above-ground framework of buildings.

[Case study: One Subiaco](#)
[Read on our website](#)



Reid Highway-Beechboro Road bridge, Perth



Trapezoid underpass for the Mitchell Freeway extension in Perth

Bridges, Overpasses and Tunnels

Precast Concrete Arches

Geoquest's patented TechSpan® precast concrete arch systems are used for short to medium span earth-overfilled bridging structures. Our largest installation covers a 21m span (the largest precast concrete arch in the southern hemisphere). Precast arches are ideal for roadway and railway bridge underpasses and mining tunnels. TechSpan® arches provide a versatile and durable solution for various applications.

Case study: The Southern Hemisphere's largest precast concrete arch; spanning 21 metres
[Read more on our website](#)

Concrete Structural Culverts

TechBox™

TechBox™ is a precast concrete box structural culvert that is designed for building robust structures, such as underpasses, culverts and cut-and-cover passageways. Utilising precision-made segmental precast concrete sections, TechBox™ ensures efficient and safe installation.

Trapezoidal Culverts

An alternative to conventional arches, trapezoidal culverts are used for pedestrian or small vehicular underpasses. The flat top section deals with low cover while meeting design envelope requirements.



Installation of a TechSpan® precast concrete arch at a mining operation in north Western Australia

Bridge Headstocks and Pier Caps

These precast elements were commonly cast in situ. However, doing so brings additional risks, such as potential delays due to inclement weather or lack of onsite personnel, additional costs and safety risks.

Geoquest has developed capabilities to manufacture these elements off site in a safer, more controlled environment. These precast elements provide essential support for bridge structures, ensuring stability and safety, and are designed to meet the specific requirements of each project, ensuring optimal performance.

Case study: Westconnex, Windsor Bridge replacement project, Sydney, NSW. [Read more on our website](#)



Windsor Bridge, Sydney

Custom Precast

Not every project is the same. Our design engineers and precast manufacturing teams are here to help, whatever your project need. It starts with understanding the intent and requirements, specifications and challenges. We enjoy applying engineered processes, procedures and systems to every ounce of concrete we pour.

Bespoke services and solutions include:

- 3D Modelling
- Mould design
- Material optimisation
- Curing methodology
- Concrete mix design
- Lifting design
- In-house concrete testing abilities
- Innovative manufacturing processes
- Interface solutions
- Ease of installation



Chamber lift, NorthConnex, Sydney



Decorative wall panel facings, Claisebrook, Perth



Pile cap, Windsor Bridge, Sydney

Precast Walls and Noise Barriers



T-Wall installation

Modular Gravity Retaining Walls

T-Wall® is an innovative precast concrete modular gravity retaining wall solution, constructed by combining structurally reinforced concrete units with engineered backfill. Suitable for building grade separations for roadways and railways, T-Wall® offers efficient installation and minimal maintenance.

Counterfort Retaining Walls

TechWall™ is a site-specific engineered precast concrete counterfort retaining wall system. It combines full-height facing units with perpendicular counterforts, creating an efficient and robust cantilever retaining wall. Ideal for road and railway overpasses and, slope retention, advantages include reduced excavation requirements and rapid installation.

Case study: The award-winning Ovingham level crossing removal. [Read on our website](#)



Ovingham, Adelaide



Noise walls with decorative facings Claisebrook, Perth

Decorative Elements and Wall Facing Panels

Enhance the aesthetic appeal of your project with our decorative precast concrete elements and wall facing panels. Available in various finishes and styles, these elements add visual interest while maintaining structural strength and durability.

The image shows a close-up of modular precast concrete noise barrier panels. The panels are arranged in a row, with one panel in the foreground being bright yellow and the next one being bright orange. The panels have a trapezoidal footprint and are connected by a white concrete joint. The background is a plain, light-colored wall.

Noise Walls and Fascia Panels

Our post-and-panel and other [noise walls](#) provide effective sound barriers for residential, commercial and industrial areas. These solutions are designed for quick installation and minimal maintenance, enhancing the living and working environment. Reinforced Earth's FanWall™ noise barriers are a modular precast concrete barrier solution designed for noise reduction, security, and privacy. Featuring a unique trapezoidal footprint for stability, FanWall™ panels are ideal for architectural finishes and can be easily dismantled or relocated.

Claisebrook rail depot noise walls in Perth, Western Australia. [Read the case study on our website](#)



Sydney Gateway Project

Architectural finishes and decorative precast concrete elements. [Case study: Read about Sydney Gateway here](#)



West Gate Tunnel, Melbourne

Fully Certified

Geoquest Australia operates at the highest level of Health & Safety and Quality Management to successfully deliver major infrastructure projects.

ISO 9001 :2015

ISO14001 :2015

AS/NZS 4801 :2001

Master Pre-caster (NPCAA)

Main Roads Authority approved

Chartered Engineers Australia

Sponsor of the Concrete Institute of Australia



ENGINEERS
AUSTRALIA
Chartered Professional Engineer
MEMBER



MASTER PRECASTER
National Precast Member

CONCRETE INSTITUTE 
of AUSTRALIA

Sustainable

As a business, we are committed to minimising our environmental impact. Our target is to reduce our direct (Scope 1 and 2) emissions by 40% by 2030 (in historical configuration and compared to 2018).

Geoquest has also set a target to reduce our indirect (upstream and downstream Scope 3 emissions) by 20% by 2030 compared to 2019.

Communities

With offices nationwide and manufacturing sites in key regional locations, we support communities in which we operate. This includes by employing and training local residents to help bring new skills and jobs to regional areas. Another aspect of this is supporting the social fabric in the towns in which we are based, and as such, we are strong supporters of local sporting clubs Australia-wide.



Why Choose Precast

Precast concrete advantages over cast-in-place solutions:

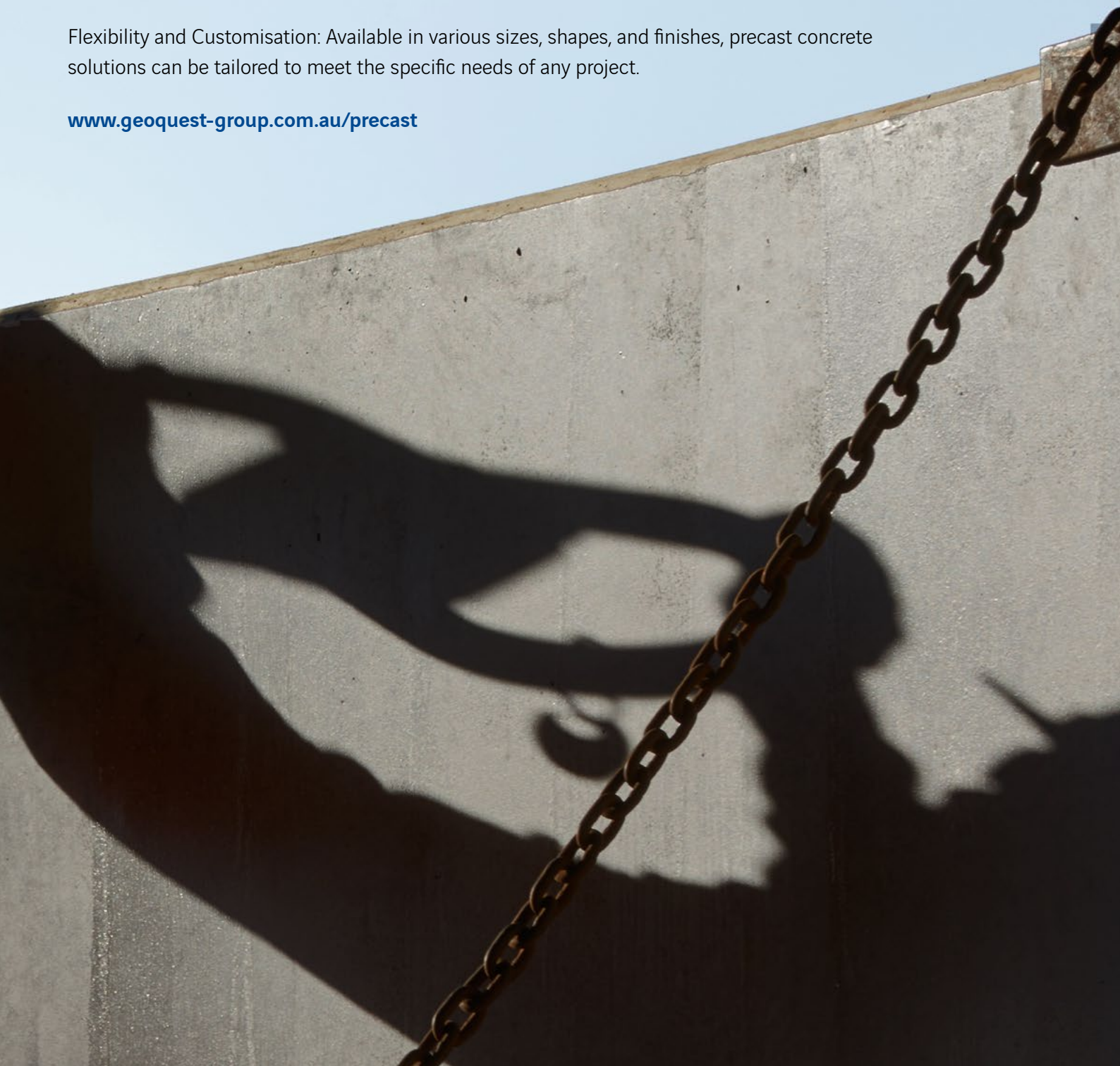
Streamlined Design and Construction: Precast elements simplify the design process and accelerate construction timelines, reducing overall project costs and improving efficiency.

Consistent Quality and Durability: Manufactured in controlled environments, precast concrete elements ensure high-quality standards, resulting in durable and reliable structures.

Environmental Benefits: Precast production minimises waste, and the longevity of the elements reduces the need for frequent replacements, promoting sustainable construction practices.

Flexibility and Customisation: Available in various sizes, shapes, and finishes, precast concrete solutions can be tailored to meet the specific needs of any project.

www.geoquest-group.com.au/precast



Partner with Geoquest

Geoquest Australia combines civil engineering expertise with advanced precast concrete manufacturing capabilities nationwide to offer an extensive portfolio of precast concrete solutions.

[Contact us](#) today to learn more about our precast concrete solutions and how we can support your construction and infrastructure needs. [Visit our website](#) to explore our offerings and try our interactive design tools.

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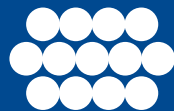
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Our Locations

- Precast concrete manufacturing sites
- Offices



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