

# ELLENBROOK WILDLIFE BRIDGE: ENGINEERING WITH NATURE IN MIND

THE ELLENBROOK WILDLIFE BRIDGE IN WESTERN AUSTRALIA REPRESENTS A MILESTONE IN ECOLOGICALLY CONSCIOUS INFRASTRUCTURE, DEMONSTRATING HOW ENGINEERED SOLUTIONS CAN HARMONISE WITH THE NATURAL ENVIRONMENT.



The connection provides a vital link to help local wildlife pass the highway safely.

**PROJECT:** Ellenbrook Wildlife bridge  
**LOCATION:** Tonkin Highway, WA  
**PRECASTER:** Geoquest  
**CONTRACTOR:** Great Northern Connect

Success on the project has already influenced other works nationally.



**D**esigned to provide safe passage for native fauna across Tonkin Highway, the 12-metre-wide bridge stands as a testament to sustainable design and thoughtful construction practices.

As part of the NorthLink WA Central Section, the bridge was constructed by contractor Great Northern Connect – a joint venture between BGC Contracting and Laing O'Rourke – under the direction of Main Roads Western Australia.

**ENGINEERED FOR THE ENVIRONMENT**  
National Precast Master Precaster Geoquest Australia played a critical role in the project, supplying more than 32,600 square metres of Reinforced Earth® walls and precast concrete elements. These components were essential not only to the structural performance of the bridge but also to its environmental credentials.

"We were proud to contribute to such a forward-thinking and environmentally significant project," said Riccardo Musella, Managing Director of Geoquest Australia.

"The Ellenbrook Wildlife Bridge shows what's possible when infrastructure is designed with wildlife in mind. It's a great example of how engineering can support biodiversity and create positive, lasting outcomes for communities and the environment."

Manufactured following factory-controlled processes, the precast elements ensured consistency, precision and timely delivery.

Combined with Geoquest's expertise of the engineered fill and soil-structure interaction, the result was a durable, structurally sound solution capable

of supporting both ecological and civil objectives.

## ENHANCING BIODIVERSITY THROUGH DESIGN

The bridge's form and function were carefully considered to support wildlife movement and encourage species use. Precast elements were designed for seamless integration into the landscape, providing a foundation for natural features such as rockeries, logs and mounding. The bridge was then fully vegetated using native trees, shrubs and ground covers that reflect the surrounding bushland, creating a familiar and inviting habitat for fauna.

Today, several years after its completion, the bridge has evolved into a densely planted corridor that functions as a thriving ecosystem. Monitoring efforts have confirmed that the structure is regularly used by local wildlife – including larger species such as emus – highlighting its effectiveness in restoring habitat connectivity.

## A LEGACY OF SUSTAINABLE DESIGN

The Ellenbrook Wildlife Bridge exemplifies how modern construction methods, such as precast concrete, can deliver sustainable, resilient infrastructure without compromising on



Environment has come first for the Ellenbrook Wildlife Bridge.



The project has exemplified how precast can be implemented to achieve environmentally conscious project outcomes.

environmental outcomes. It has proven that it is possible to reduce ecological impact while maintaining structural integrity and performance.

Its success has already inspired the adoption of similar wildlife infrastructure across the state, including on the Wilman Wadandi Highway (formerly the Bunbury

Outer Ring Road), where Geoquest once again supplied critical components.

"Projects like this redefine what infrastructure can be," said Mr Musella. "When we prioritise sustainability, habitat protection and innovative design, we're not just building roads and bridges – we're building a better future." ■

## BUILDING FOR THE LONG TERM

The Ellenbrook Wildlife Bridge spans 12 metres and is designed solely for fauna, featuring native vegetation, logs, mounding and natural rockeries that discourage human use while supporting species movement. Years on, it continues to function as a thriving habitat corridor – a model for future infrastructure that respects and preserves Australia's unique ecosystems.