

# Poor Man's Gully Bridge



## BRIDGE TO WEATHER ANY STORM... KEEPING COMMUNITIES CONNECTED

When a deluge of rain caused flooding on a major highway in Central Queensland in late 2014, authorities knew they had to act quickly. Bad damage to Poor Man's Gully Bridge on the crucial Burnett Highway impacted the route from Biloela, heading south to Thangool. The solution was a replacement bridge in precast, designed to withstand flood waters, and ensure the Burnett Highway remains open through severe weather events.

### INSITU REDESIGNED TO PRECAST FOR SPEEDY SOLUTION

Precast concrete manufacturer and National Precast member Stresscrete was contracted to supply a single span bridge by Roadtek, the commercial business within the Department of Transport and Main Roads which provides transport infrastructure throughout Queensland. Based in Rockhampton and with more than 20 years' experience in manufacturing an extensive range of precast concrete elements, the company was ideally placed to partner with the project team to ensure a fast solution.

Stresscrete owner and manager Craig Zinn says although it was a small project, it was an important one. "A collaboration of people including our client, the bridge builder, the design engineer and our team worked together with minimal time to quickly redesign insitu works to precast," Mr Zinn said. "This included discussing and resolving various construction issues as the design progressed through each stage", said Mr Zinn.

**Precaster**  
Stresscrete

**Engineer**  
GHD

**Client**  
QLD Dept of Transport

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Stresscrete prides itself in its commitment to delivering quality products on time and this bridge was no exception. Prestressed piles and deck units, lower abutment blocks and abutments, lower wing wall blocks and wing walls were manufactured for the bridge. Mr Zinn says the piles and deck units were cast in the factory's in-line stressing bed, while all remaining precast was manufactured using traditional methods utilising timber formwork.

But it was a project that required some innovative thinking. "Purpose built blockouts were cast into the abutments and lower abutment blocks and later removed, to accommodate the piles. The inner surfaces of these blockouts were then green-cut to accommodate a construction joint with the piles using small amounts of insitu concrete to structurally lock the piles to the abutments".

### **FAST, SAFE, ECONOMICAL HIGH QUALITY SOLUTION**

Mr Zinn says precast was the best solution for such a time sensitive project. "The time saving was significant for such a small project, but saving time was essential because this was a project that had to be fast tracked".

"Our client preferred to minimise the amount of insitu works for ease of construction, better on-site safety with less on-site labour and to save construction time. All that ultimately reduced on-site costs."

As well, the advantages of off-site casting in a controlled environment with a quality manufacturer were also a priority.

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