



InQuik[®]

BRIDGING SYSTEMS

CASE STUDY: BYRON SHIRE SETTLEMENT ROAD

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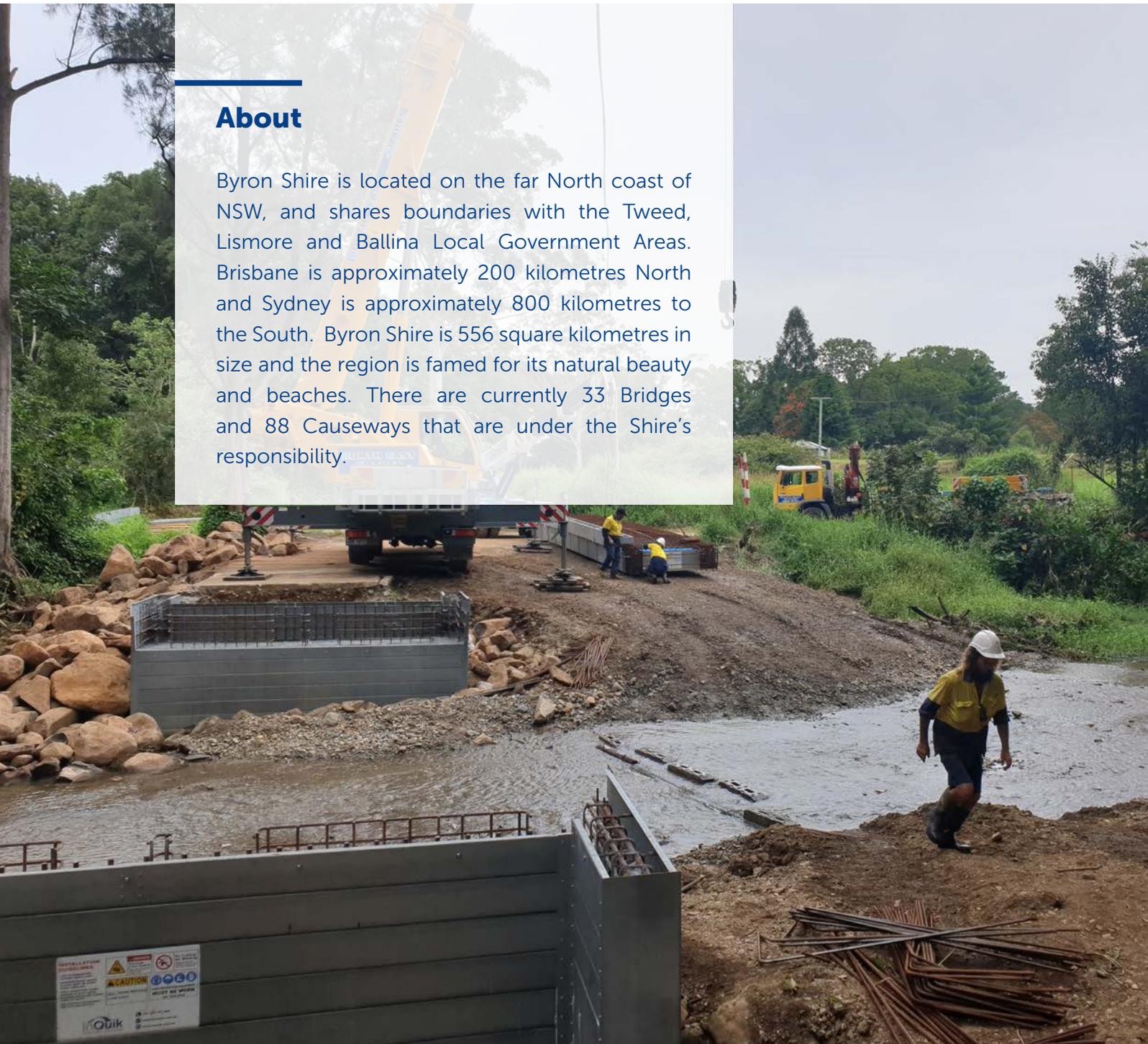
Byron Shire Council deliver the “Bringing back the Brunswick” project by installing their second InQuik bridge.

“Bringing back the Brunswick” is described as one of the most significant environmental projects ever undertaken in the Byron Shire, with Council receiving grant funding from the NSW Department of Primary Industries Fisheries (DPI Fisheries) to reinstate fish passage in the Brunswick River.

The project will not only see two other causeways removed, but further fish barriers removed. The identified existing structures stop fish including bass and mullet from moving upstream, which means that they can only migrate to the upper reaches of the Brunswick River for around 10 days a year when the river is flooding.

About

Byron Shire is located on the far North coast of NSW, and shares boundaries with the Tweed, Lismore and Ballina Local Government Areas. Brisbane is approximately 200 kilometres North and Sydney is approximately 800 kilometres to the South. Byron Shire is 556 square kilometres in size and the region is famed for its natural beauty and beaches. There are currently 33 Bridges and 88 Causeways that are under the Shire’s responsibility.



Challenges

Byron Shire council had a short two-month window to install the new InQuik bridge and replace the old, concrete causeway.

Having previously installed an InQuik bridge for phase one of the project, the team at Byron Shire Council valued its “top-down installation” which minimised impact on the waterway and the speedy two-stage “place and pour” installation process.

Construction of the InQuik bridge was performed by the Byron Shire Council works team, with local contractors assisting with screw piles for the structure and with concrete supply.

Three key reasons which proved InQuik were the optimum solution:

- 1) Reduced site time with the speedy two-stage “place and pour” installation process, thereby ensuring project timelines met**
- 2) Minimal impact on the waterway and surrounding environment; and**
- 3) Reduced maintenance costs over the 100 year “whole of life” asset plan.**

How We Helped

The new structure at Settlement Road goes over the Brunswick River rather than through it. This enables fish to move freely under the bridge. It's also good news for residents because the bridge will not be as susceptible to flooding.

The InQuik system was selected as it met all of the structural criteria, and it met the very tight timeline for design and construction.

“The pre-engineered InQuik solution is great to install as just a few hours and you're done, once all the ground works and piling is completed” – feedback from an engineer at Byron Council.

The InQuik bridge project was a collaborative process, as InQuik and Bridge Knowledge from Nana Glen, NSW worked alongside the Byron Shire Council team to coordinate the design, supply and installation of the bridge.



Results

The project is a huge win for the environment because the opening of the upper reaches of the Brunswick River will have a long-term positive impact on native fish populations.

The replacement of the causeways with low maintenance InQuik bridges at Settlement Road and Durrumbul Road, Upper Main Arm (Completed May 2018) provides safer, reliable access for the local community and fish passage for many decades to come.

DPI Fisheries spokesperson said the project as a whole will open up 7 kilometres of upstream habitat and allow 27.4 kilometres of fish passage to the estuary mouth, "ensuring that native fish will have access to 90 per cent of the river for 100 per cent of the year".

"The restoration works will benefit fish species including the iconic Australian Bass, which live in the upper freshwater reaches of the river and migrate to the lower Brunswick Estuary for breeding," they explained.

Key Project Points

- Byron Shire Council installed the InQuik system using local plant, materials and labour, ensuring funds and work were retained within the local community
- Efficient two-stage "place and pour" installation minimised the environmental impact on the waterway
- The speedy installation process minimised exposure to and risks associated with weather delays; and
- Mitigated safety and WHS risks due to lightweight components, top-down installation and reduced site time.

