



## port of brisbane motorway upgrade case study

### Port of Brisbane Motorway Upgrade

November 2008 – July 2009

**frc environmental** was commissioned as part of a team led by **Parsons Brinkerhoff** to contribute to an **Environmental Assessment Report (EAR)** for the proposed upgrade of the **Port of Brisbane Motorway** by the **Department of Transport and Main Roads (DTMR)**.

#### Project requirements overview

DTMR is committed to ensuring the best practical environmental outcome and conforming to all relevant regulatory requirements. **frc environmental** was requested to contribute to the EAR for the Port of Brisbane Motorway upgrade as it crosses a number of waterways, and is adjacent to mangrove and saltmarsh wetlands. Specifically, we were required to review available data, assess its adequacy, design and undertake the appropriate surveys to fill any gaps, provide a legislative framework, assess impacts and suggest mitigating measures.



Crossings and culverts can significantly impact flows in mangrove lined creeks

#### Project Performance

- Extensive first hand experience in the area allowed us to quickly and accurately complete a gap analysis, and identify what further work was required
- Evaluation of the ecological health of the waterways, using macroinvertebrate community composition and mangrove condition, ensured potential impacts were assessed in an appropriate context
- Survey design was statistically robust providing defensible data; statistical results were explained in plain English to ensure their meaning was easily understood
- Effective liaison with Parsons' team members ensured that we contributed insight and clarity to the assessment team
- Our quick response time enabled the team to complete the work on time and within budget

**"Sharing our commitment to providing quality outcomes for clients, on time and within budget, frc environmental are our preferred providers of specialist marine ecological services."**

#### Mike Hall,

Principal Environmental Engineer  
(Parsons Brinckerhoff Australia Pty Ltd).

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Our experienced ecologists are experts at assessing ecological health and value to fisheries



Traversing mangrove "quick muds": accessing sites can be problematic!

## Our tailored approach and methodology

This project provided some interesting challenges. The Port of Brisbane Motorway crosses a number of estuarine wetland areas and waterways, including Bulimba Creek, Lindum Creek, Doughboy Passage and the Brisbane River. Much of the land in between these estuarine wetlands once formed part of a forested freshwater wetland complex. However, this land has been substantially cleared, drained and filled. Whilst little of the original freshwater forested wetlands remains, there are still some areas of degraded freshwater wetlands adjacent to the corridor. The Port of Brisbane Motorway is also close to Ramsar listed wetlands and the Moreton Bay Marine Park; areas of considerable conservation significance.

In order to ensure the best approach and methodology to address these issues, **frc environmental** used existing data, experience and expertise to provide a cost effective and scientifically rigorous study to investigate specific areas.



Sediment pore-water - another piece of the puzzle

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## ○ industry experience

- Ports & Maritime Operations
- Mining, Oil & Gas
- Linear Infrastructure
- Power Generation & Distribution
- Waste Management
- Water Infrastructure
- Effluent Infrastructure
- Urban, Industrial & Agricultural Development
- Government
- International Development & Aid
- Fisheries & Aquaculture
- Wetland Construction & Rehabilitation
- Tourism
- Defence
- Forensic & Legal

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○ freshwater

○ estuarine

○ marine