



# PROJECT SHEET

## CULVERT STRUCTURAL REMEDIATION

### PROJECT SUMMARY

Client: Lendlease

Location: Brisbane

Duration: 3 Years

Value: \$ 2 M

#### Major Challenges Overcome:

- Weather - access
- De-watering – water quality
- Working in confined spaces



### Culvert C2010 (Southbound)

project challenges including flooding, ground conditions and environmental issues creating access difficulties.

#### Program

The GUN Project began at the end of the rainy season in May 2015 and continued through to December. Dynaciv began work in January 2016 with most of the project completed by the end of 2017. The remaining few culverts were completed in 2018.

#### Project Scope

The project included the following:

- Structural repairs to any structure on the GUN Project
- Repairs to all culverts.

#### Completed Works

The following works were completed at Culverts C2010 (15 cells), C2009 (16 cells) and C2008 (6 cells) in 2016:

- Spalling repairs: 294 in total
- Replaced corroded bars (sections exceeding 20% loss): 48m
- Crack repair: 360m
- Waterproof coating:(Vandex Concrete Grey): 950m<sup>2</sup>
- Pressure washing: 950m<sup>2</sup>

### The Project

The Gateway is the main highway allowing traffic to bypass congested Brisbane CBD roads. With traffic flows of over 83,000 vehicles a day, the northern section required an upgrade to improve traffic flow and de-stress Brisbane's motorway network. The Gateway Upgrade North (GUN) Project comprised of additional bridges, additional lanes and new flyovers.

Dynaciv was engaged by the Principal Contractor, Lendlease, to provide a structural remediation solution for the many defective concrete culverts running under the highway. Other structural remedial works included coating bridge strengthening, jacking and grouting works.

Some of the work was to be carried out in low-lying areas around Nudgee and Deagon, which presented a variety of

**Site Activities:**

<p><b>Confined Space Access</b></p> 	<p><b>Confined Space Rescue</b></p> 
<p><b>Cleaning Culverts</b></p> 	<p><b>Pressure Wash Culverts</b></p> 
<p><b>Reinforcement Replacement</b></p> 	<p><b>Spalled and broken out culvert wall (form &amp; pour repair)</b></p> 
<p><b>Crack Repairs</b></p> 	<p><b>Completed Spalling Repairs (high build)</b></p> 



GATEWAY UPGRADE NORTH

# SITE BULLETIN

Edition 8 | October 2016

## SPOTTED OUT ON SITE

**During recent culvert concrete repair works beneath the Gateway Motorway, our subcontractor, Epoxy Solutions, discovered some Welcome Swallow eggs and hatchlings.**

Epoxy Solutions, who have been very proactive at implementing environmental controls to ensure programmed works here on site are not affected, quickly notified our team of their find.

As culverts are deemed to be a confined space, we had identified the risk of fauna inhabitants being present prior to commencing these works and engaged AusEcology to ensure they had confined space trained staff available, should they ever need to enter a culvert.

This prior planning enabled AusEcology to promptly translocate the hatchlings and eggs to carers, where they will be looked after until they are able to be released into the wild.

*Shamaul and Sarah* | Site Engineer and Environmental Advisor (south)



**Above and Right:** AusEcology's fauna spotter catcher gathering the Welcome Swallow eggs.