

City Reach Boardwalk, Brisbane River

Refurbishment of concrete walkway & bicycle path



Brisbane's City Reach Boardwalk along Brisbane River

The Background:

Brisbane's popular City Reach Boardwalk which runs along the Brisbane River from the City Botanic Gardens to Howard Smith Wharves, has undergone a \$7 million refurbishment in order to extend its life. The first stage of maintenance work (between 145 and 175 Eagle Street) was completed last year, this included replacing deck panels, patch repairs and sealing concrete to eliminate further corrosion.

The second stage focused on two sections of the bridge at Admiralty Quays and River Place Apartments. This stage involved repairing and replacing the concrete deck slabs that support the suspended bridges and repairing piles and beams under the boardwalk.

The Challenge:

Brisbane City Council's warranty required a single source supplier that could provide a complete repair system for the maintenance work needed on the boardwalk. The complete repair system installation for the deck soffit, which also included fiber reinforced polymer (FRP) strengthening, was required to be completed in seven days.

On top of these requests, project engineers requested the repair mortar to achieve 40 megapascals (MPa) before installation of the FRP laminate strip in order to take the load where prestressed strand sections were damaged.

Project:

City Reach Boardwalk, Brisbane River

Location:

Between Admiralty Towers & River Place Apartments, Brisbane

Project completed:

2015

Applicator / Contractor:

O'Connor Kelly

Products used:

MasterProtect 8065CP
MasterEmaco P 5000AP
MasterEmaco N 5200CI
MasterEmaco S 5400CI
MasterEmaco S 5440CI
MasterEmaco S 822CI
MasterEmaco N 5100
MasterProtect H 1150

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Beam repair preparation & installed MasterProtect 8065CP anodes

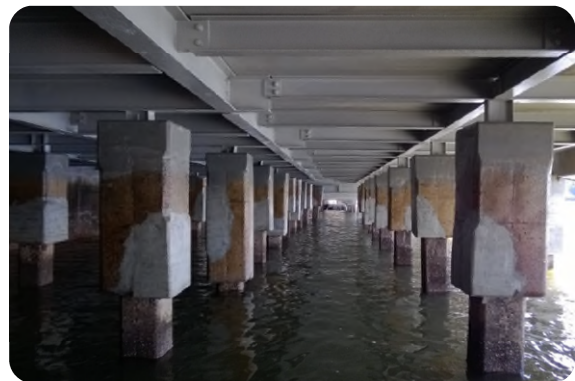
Our Solution:

Master Builders Solutions presented a specification for a complete repair system in order to meet the required program for the soffit repairs and rectification of the pile caps on the boardwalk.

Master Builders Solutions also worked closely with the Brisbane City Council and their contractors to ensure that compliance to warranty requirements were met.

The Customer's Benefit:

- Easy to use 'form and pour' product, MasterEmaco S 5440CI was used for the pile cap repairs to re-establish original strength and structural integrity.
- Ability to pack around the cathodic protection anodes with a low resistivity repair mortar such as MasterEmaco N 5200CI before placing MasterEmaco S 5440CI on the pile caps.
- Master Builders Solutions recommendation of experienced dry spray applicators capable of achieving high builds, saved time in application.
- Application of MasterProtect H 1150 at thick creme consistency, eliminated the possibility of excess product dropping into and potentially contaminating the Brisbane River.



Some of the 92 pile caps that were repaired

Project Facts at a Glance

- The Brisbane City Council required a complete repair system from a single supplier.
- Repairs to the boardwalk pile caps and beams included installation of cathodic protection sacrificial anodes.
- Repair to soffit by gunite and coating the soffit with silane creme to protect from further ingress of chloride ions.
- Design changes eliminated the FRP, but speed of application was still essential due to the project deadline.

Master Builders Solutions

Master Builders Solutions is a leading global manufacturer of concrete admixtures, as well as other sustainable solutions for the construction industry, focused on delivering its vision: Inspiring people to build better. Master Builders Solutions provides value-added technology and market-leading R&D capabilities to improve the performance of construction materials and to enable the reduction of CO2 emissions in the production of concrete. Founded in 1909, Master Builders Solutions has more than 1,600 employees and 35 production sites globally with over 150 employees and 6 production sites operating across Australia and New Zealand. Master Builders Solutions supports its customers in mastering their building challenges of today – for a decarbonised future.