

City Reach Boardwalk, Brisbane River

Refurbishment of the concrete walkway and bicycle path

Project:

City Reach Boardwalk,
Brisbane River

Location:

Between Admiralty Towers and
River Place Apartments,
Brisbane, Queensland.

Project completed:

September 2015

Applicator/Contractor:

O'Connor Kelly

Market sector:

Wharves and Jetties

Products used & amounts:

MasterProtect® 8065CP:

1,200 pieces

MasterEmaco® P 5000AP:

40 kg

MasterEmaco® N 5200CI:

1,140 kg

MasterEmaco® S 5440CI:

20,700 kg

MasterEmaco® S 822CI:

7,000 kg

MasterEmaco® N 5100:

75 kg

MasterProtect® H 1150:

282 litres



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.

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Beam repair preparation and installed MasterProtect 8065 CP sacrificial anodes.



Some of the 92 pile caps that were repaired.

Our solution

BASF 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.

BASF 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.
- Fast turnaround of the overhead soffit repairs was achieved with MasterEmaco S 822CI by dry spray method.
- BASF's 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.

Projects 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.

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The know-how and experience of a global community of BASF construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global BASF technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, concrete repair & protection solutions, performance grouts, and performance flooring solutions.