

Fremantle Traffic Bridge

MasterFlux 80 RMX



New Fremantle Traffic Bridge concept design, Fremantle Western Australia
Image Source: mainroads.wa.gov.au

The Background:

The Fremantle Traffic Bridge and Stirling Bridge are the only two vehicle crossings over the Swan River in Fremantle. The Fremantle Traffic Bridge is nearing the end of its service life and requires replacement. This project will construct a new extradosed bridge and two new pedestrian and cyclist paths, ensuring continued connectivity and improved transport efficiency in Fremantle.

The Challenge:

As part of this project, Brady Marine was tasked with installing bridge piles and scour mats on the harbour floor. To ensure structural stability, it was necessary to grout the gaps between the mats and piles with a material capable of resisting washout from strong tidal currents. The grout also needed to be pumpable through a maximum 50-millimetre hose diameter, allowing underwater installers to manoeuvre the pump with ease, while achieving a minimum compressive strength of 60 MPa at 28 days to meet performance requirements.

Our Solution:

Comprehensive trials were conducted at the High Wycombe facility and later at Fremantle Port in collaboration with Brady Marine to confirm and approve the final mix design parameters. Once validated, grouting works were scheduled to align with project timelines. Master Builders Solutions supplied MasterFlux 80 Ready Mix Grout, incorporating an anti-washout admixture, ensuring optimal performance in marine conditions. The grout was delivered in 4 m³ agitator trucks from Holcim's Bibra Lake batch plant, providing a consistent, high-quality supply. This solution eliminated the need for onsite mixing and significantly improved efficiency, safety and productivity across the project.

Project:

Swan River Crossing - Fremantle
Traffic Bridge: Underwater Scour
Grouting

Location:

Fremantle, Western Australia

Project Completed:

July 2025

Owner:

Main Roads, Western Australia

Applicator / Contractor:

Brady Martine & Civil Pty Ltd

Allied Delivery Partners:

Main Roads, Western Australia Laing
O'Rourke Australia Construction Pty
Limited

Arup Australia Projects Pty Ltd WSP
Australia Pty Limited

Market Sector:

Transport

Products Used & Amounts:

MasterFlux 80 RMX – 27 m³

Fremantle Traffic Bridge

MasterFlux 80 RMX



[Click Here to Watch Video](#)

The Customer's Benefit:

- Each 2-4m³ agitator load was placed in under 2 hours. If this work were completed with regular 20kg bags, it would take ~ 16-32 man hours to place.
- Shortened project timelines
- Reduced labour costs
- Reduced freight costs
- Removed the need to store pallets in hot weather, protecting grout quality and workability
- Eliminated dust emissions and disposal of ~ 3000 empty 20 kg bags
- Improved safety by removing the manual mixing of thousands of bags.

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