

Solutions for Bridge Protection & Rehabilitation

**Protecting and Extending the Life
of Critical Bridge Assets &
Infrastructure across
Australia and New**



PERMANENT
SPEED CAMERA
ON BRIDGE

Supporting Bridge & Transport Projects Across ANZ

Delivering durability, lifecycle performance and sustainability through global R&D and local expertise.

Bridges are among the most critical assets within Australia's transport network, with traffic loading, environmental exposure, water ingress and chloride attack contributing to ongoing deterioration and increasing maintenance demands. Backed by more than 115 years of global innovation and local technical expertise, Master Builders Solutions delivers proven solutions that help designers, engineers and asset owners protect, rehabilitate and extend the service life of critical transport infrastructure.

Applications Across the Bridges & Transport Sector

Bridge Decks



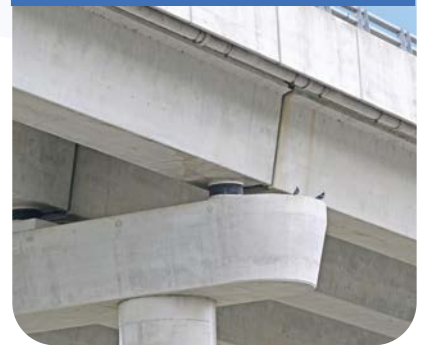
Repair, waterproofing and protection systems designed to preserve durability and reduce maintenance.

Movement Joints



High-performance joint systems engineered for durability and long-term performance.

Bearings



Specialist repair, replacement and grouting solutions for critical bridge components.

Beams & Girders



Repair, strengthening and protection solutions for structural rehabilitation.

Bridge Piers



Durable repair and protection systems for deteriorated concrete structures.

Abutments



Targeted rehabilitation solutions to maintain stability and performance.



Engineered Systems for Long-Term Asset Protection

Integrated solutions for repair, strengthening and long-term asset protection.

Master Builders Solutions provides system solutions across a wide range of bridge and infrastructure asset rehabilitation and protection applications. Each environment presents unique exposure conditions and performance requirements, demanding careful material selection and system design.



Concrete Repair

Bridge structures are exposed to ongoing deterioration caused by traffic loading, environmental exposure, carbonation, chloride attack and moisture ingress. Left untreated, these mechanisms can compromise structural integrity and accelerate asset deterioration.

Our concrete repair solutions are engineered to restore damaged structures, manage corrosion risk and deliver durable performance across rehabilitation and remediation projects.

- MasterCrete PRI 5000
- MasterCrete CI 5300
- MasterCrete CI 5488
- MasterCrete LH 5460

Structural Strengthening

Increasing traffic volumes, evolving design standards and ageing infrastructure continue to place additional demands on bridge assets. Structural strengthening offers a practical and cost-effective alternative to asset replacement.

Our strengthening systems are designed to restore structural capacity, accommodate increased loading requirements and support the long-term performance of critical infrastructure.

- MasterStrength ANC/BAR/FIB/LAM
- MasterStrength PRI 3500
- MasterStrength 4000 ADH
- MasterStrength 4500



Joint Systems & Crack Repair

Movement and construction joints play a critical role in maintaining the durability and functionality of bridge structures. Failure of these systems can result in water ingress, accelerated deterioration and increased maintenance requirements.

Our high-performance joint systems are designed to accommodate structural movement while providing long-term watertight performance in demanding service environments.

- MasterJoint CHR I95
- MasterJoint CHR 435
- MasterJoint 930
- MasterFill ER I3II
- MasterFill PR I400
- MasterFill PR I450

Protective Systems & Surface Protection

Bridge structures are continuously exposed to moisture, chlorides, UV exposure and aggressive environmental conditions that can accelerate deterioration over time.

Our protective sealers and surface treatment systems are designed to minimise ingress, enhance durability and protect critical infrastructure assets against environmental attack.

- MasterShield PRI I55
- MasterShield AC I50 & I60
- MasterShield PR I70
- MasterShield PEL II00
- MasterShield PEL II50
- MasterShield CI 8600PEL
- MasterShield CP 8I60

Precision Grouting Solutions

Bridge construction and rehabilitation projects require high-performance grouting solutions capable of delivering reliable load transfer and long-term durability under demanding conditions.

Our precision cementitious and epoxy grouting systems are engineered for applications including bearing installation, underwater placement, anchoring, post-tensioning and structural rehabilitation.

Cementitious:

- MasterFlux 200 & 20I
- MasterFlux 700
- MasterFlux UW 788
- MasterFlux 8I0
- MasterFlux 870
- MasterFlux 880 & 88I
- MasterFlux HST 4600

Epoxy:

- MasterFlux ER 6I8
- MasterFlux ER 628
- MasterFlux ER 648

Ready-Mixed:

- MasterFlux 80RMX
- MasterFlux 200RMX
- MasterFlux 5460RMX



Scan the QR Code

Explore our full civil and construction product portfolio





Seymour Bridge Hume Freeway, Victoria
MasterStrength CFRP Structural Strengthening



Proven Experience in Demanding Environments

Project case studies demonstrating effective system selection and performance in challenging site conditions.

Fremantle Traffic Bridge - WA

Products Used: MasterFlux 80RMX

Completed: 2019

Contractor: Brady Martine & Civil Pty Ltd

Asset Owner: Main Roads, Western Australia

Challenge: To support the installation of bridge piles and scour mats, a high-performance grout was required that could resist washout in strong tidal conditions, be pumped through a 50 mm hose for underwater placement, and achieve a compressive strength exceeding 60 MPa at 28 days.

Solution: Comprehensive trials were undertaken in collaboration with Brady Marine to validate the final grout design and confirm performance under marine conditions. Master Builders Solutions supplied MasterFlux 80 Ready Mix Grout with anti-washout technology, delivered directly from a local batch plant, eliminating onsite mixing and improving efficiency, safety and productivity. The grout system achieved the required performance criteria while providing a reliable and consistent solution for underwater placement applications.



Scan the QR Code to
Watch the Video

Lerderderg Bridge - VIC

Products Used: MasterStrength BAR, LAM and FIB & MasterShield AC 160

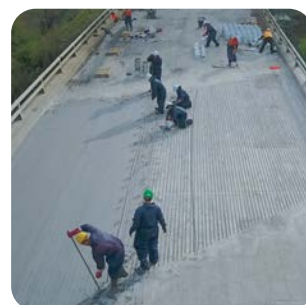
Completed: 2017

Contractor: Central Remedial / Ace Infrastructure

Asset Owner: VicRoads/DTP

Challenge: Existing bridge I-girders required strengthening in flexure and shear to accommodate increased freight load limits. The project also required strengthening of the bridge deck while overcoming access constraints, adverse weather conditions and limited concrete cover to the existing reinforcement.

Solution: Master Builders Solutions supplied a complete carbon fibre strengthening solution using near surface mounted bars, laminates and fabrics to restore structural capacity. Supported by onsite technical expertise throughout installation, the system was completed with an anti-carbonation coating to deliver quality application and long-term durability.



Technical Expertise Supporting Better Bridge Outcomes

Bridge infrastructure demands more than individual products. It demands compatible, high-performance systems supported by technical expertise to address the challenges of construction, rehabilitation and long-term asset protection. From specification and design support through to construction, remediation and ongoing maintenance, Master Builders Solutions provides integrated solutions engineered to enhance durability, extend service life and support the delivery of critical transport infrastructure.

Our approach combines advanced technologies, local technical expertise and hands-on project support to help designers, asset owners and contractors achieve reliable, long-term performance outcomes.

Combining advanced materials, local expertise and hands-on technical support, we help ensure:

- Compatible systems across repair, protection and strengthening applications
- Enhanced durability and extended asset service life
- Reduced maintenance requirements and lifecycle costs
- Confidence throughout design, specification and construction
- Practical technical support from project inception through to completion



Master Builders Solutions®

MasterAir

Complete solutions for air-entrained concrete

MasterStrength

Solutions for concrete strengthening

MasterCast

Solutions for the manufactured concrete product industry

MasterCell

Solutions for concrete density

MasterEase

Low viscosity for high performance concrete

MasterCrete

Solutions for concrete repair

MasterFinish

Solutions for formwork treatment and surface improvement

MasterFlux

Solutions for precision grouting

MasterFiber

Comprehensive solutions for fibre reinforced concrete

MasterGlenium

Solutions for high performance concrete

MasterFill

Solutions for concrete injection

MasterKure

Solutions for concrete curing

MasterLife

Solutions for enhanced durability

MasterMatrix

Advanced rheology control for concrete

MasterPel

Solutions for hydrophobisation, anti-efflorescence and surface protection

MasterPolyheed

Solutions for mid-range concrete

MasterPozzolith

Solutions for water-reduced concrete

MasterShield

Solutions for concrete protection

MasterRheobuild

Solutions for high strength concrete

MasterRoc

Solutions for underground construction

MasterFlex

Solutions for waterproofing and sealing

MasterSet

Solutions for set control

MasterSuna

Solutions for sand and gravel in concrete

MasterSure

Solutions for extraordinary workability retention

MasterCoat

Solutions for industrial and commercial

Master X-Seed

Advanced accelerator solutions for concrete

Quantified Sustainability Benefits Advanced Chemistry by Master Builders Solutions

Let the numbers do the talking: We have portrayed some of our most eco-efficient product solutions for concrete and precast production, construction, civil engineering, and flooring.

sustainability.master-builders-solutions.com



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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*. The company provides value-added technologies and market-leading R&D capabilities to improve the performance of construction materials and enable the reduction of CO2 emissions in concrete production. Founded in 1909, Master Builders Solutions employs more than 170 people and operates six production sites across Australia and New Zealand, as part of a growing global network with a strong and expanding international presence. Master Builders Solutions is committed to supporting customers in overcoming today's construction challenges for a decarbonised future.

