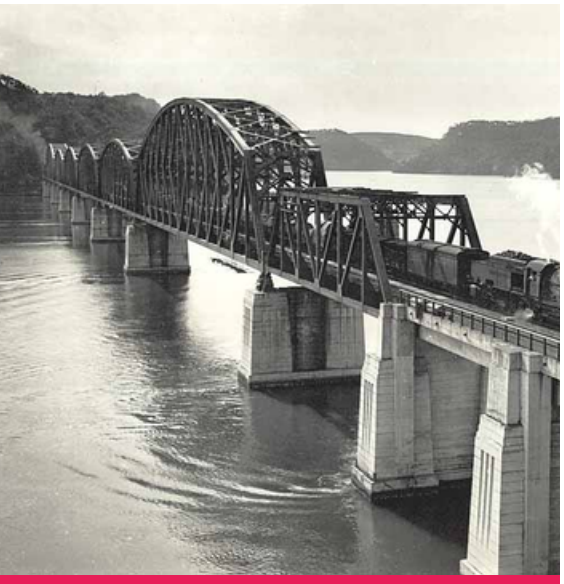
CASE STUDY

Enduris Group Selects GMA SpeedBlast™ to Support Refurbishment of the Historic Hawkesbury River Rail Bridge





Project	Abrasive blasting and protective coating refurbishment of the historic Hawkesbury River Rail Bridge, including the removal of legacy lead-based coatings from approximately 90,000 m² of structural steel. The project is currently in refurbishment and expected to be completed in 2034.
Location	Hawkesbury River, New South Wales, Australia
Customer	Enduris Group, a rebrand of Eptec Infrastructure
Client	Sydney Trains
Abrasive	GMA SpeedBlast™
Distributor	BlastOne International

Project Facts

- 842-metre-long rail bridge comprising two concrete spans and eight steel truss spans.
- Approximately 90,000 m² of structural steel undergoing blasting and recoating.
- More than 60 personnel working across land-based and marine operations.
- Around 12 dedicated blasters operating daily across multiple work fronts.

Overview

As part of a major asset renewal program, Sydney Trains commissioned the refurbishment of the historic Hawkesbury River Rail Bridge, an 842-metre-long rail crossing that has served as a critical transport link for more than 85 years.

Enduris was selected to deliver the multi-year refurbishment works, which include the removal of legacy lead-based coatings, steel repairs, and the application of a new long-term protective coating system across approximately 90,000 m² of structural steel. The project is being delivered through a combination of land-based and marine operations while maintaining ongoing rail services throughout the refurbishment.

To achieve the required level of surface preparation, Enduris selected GMA SpeedBlast™ as the abrasive for the project. With strict environmental controls, demanding production targets, and extensive blasting activities occurring within enclosed containment systems, consistent abrasive performance was critical to achieving project objectives.

The project required the safe and efficient removal of existing coatings while meeting stringent coating specifications and environmental requirements. With a large surface area, complex access conditions, and sensitive marine surroundings, selecting the right abrasive played an important role in delivering reliable and efficient surface preparation.

The Challenge

The project presented significant surface preparation challenges, combining the scale of a major infrastructure refurbishment with complex access, stringent coating specifications and strict environmental controls. Abrasive selection was critical to achieving consistent blasting performance, maintaining productivity and managing dust and waste within a sensitive marine environment.

- **Large-Scale Refurbishment:** Approximately 90,000 m² of structural steel requiring abrasive blasting and coating renewal.
- **Legacy Coating Removal:** Effective removal of existing lead-based coatings while achieving the specified surface cleanliness and profile.
- **Stringent Environmental Controls:** Blasting over sensitive marine waters demanding rigorous containment and waste management.
- **Confined Working Conditions:** Sealed containment scaffolding creating challenges for dust control, visibility and blasting efficiency.

Why is GMA Garnet™ the preferred blasting abrasive?

Achieve safe, effective blasting with minimized consumption and unmatched coating adhesion.

Surface quality
The proven choice for exceptional coating adhesion and reduced embedment, outperforming other garnet abrasives.

High productivity
GMA maximizes productivity and can significantly reduce the cost of surface preparation jobs.

Reduced consumption
Lower your abrasive consumption by 30-50%, giving you savings in abrasive purchase costs, as well as transport, storage and disposal costs.

Workers safety
Garnet is a chemically inert mineral, with little to no heavy metals creating worker health and safety risks or environmental contamination.

Low dust blasting
Independent tests show GMA Garnet™ cuts dust, boosting visibility and lowering contamination.

Sustainable resource
GMA Garnet™ adheres to strict quality compliance, offering a responsible solution for used garnet disposal and environmental sustainability.

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Disclaimer: GMA applies a uniform methodology to compare costs across various variables. However, discrepancies in costs may occur. It is crucial to consult with GMA and alternative suppliers to confirm the final associated costs and pricing before finalizing your choice of blast abrasive.

The information presented is intended for comparison purposes only and may not accurately reflect the specific prices and costs associated with your blasting project. GMA disclaims any liability for differences between these estimates and actual costs incurred.

Please be aware that the estimates provided are based on blasting bare steel sheets and are meant for general informational use. The calculated figure does not represent a formal offer, and any declarations made herein should not be considered definitive or legally binding. GMA is not accountable for any errors that may arise from rate changes or offers not reflected in this tool's results post-use.

We strongly recommend verifying the most current offers and prices with your chosen suppliers.

- **Live Rail Operations:** Refurbishment works requiring careful coordination around ongoing Sydney Trains services.
- **Long-Term Asset Protection:** Consistent, specification-compliant surface preparation essential to the durability and service life of the new coating system.

Solution

GMA SpeedBlast™ was selected by Enduris for the Hawkesbury River Rail Bridge refurbishment project due to its reliable performance, low dust generation, and ability to efficiently remove existing coatings while achieving the specified surface profile for the protective coating system.

GMA Advantage

- **High Productivity:** Efficient coating removal supported productivity across the project's 90,000 m^2 scope.
- **Effective Surface Preparation:** Achieved the required cleanliness and anchor profile for coating adhesion and long-term asset protection.
- **Low Dust Generation:** Improved visibility within enclosed containment areas, supporting safer and more efficient blasting.
- **Low Embedment:** Produced a clean surface suitable for coating application.
- **Environmental Performance:** Reduced abrasive breakdown helped minimize waste and support environmental management requirements.
- **Reliable Supply:** Consistent product availability supported uninterrupted project delivery alongside ongoing rail operations.
- **Operational Efficiency:** Durable abrasive performance reduced waste, minimized rework, and supported efficient project execution.

"The Hawkesbury River Rail Bridge refurbishment is a complex, long-term infrastructure project that requires consistent performance across every stage of surface preparation. GMA SpeedBlast™ has provided the reliability, productivity and surface quality required to help us efficiently remove legacy coatings and prepare the steelwork to specification. The consistency of the product and dependable supply have been important factors in supporting project delivery."

Neil Mathur, Project Director - Rail, Enduris Group.

Summary

When delivering large-scale infrastructure refurbishment projects, Enduris relies on products that consistently perform to specification and support efficient project execution.

By selecting GMA SpeedBlast™, Enduris achieved efficient coating removal, consistent surface preparation outcomes, and the surface quality required for the application of a long-term protective coating system.

Combined with GMA's guaranteed quality, reliable supply, and technical resources, SpeedBlast™ is helping Enduris deliver the successful refurbishment of one of Australia's most significant rail infrastructure assets while extending the bridge's service life for decades to come.