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## ABSTRACT SPECIFICATIONS

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# Auckland Harbour Bridge: Meeting environmental challenges sustainably

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### Abstract:

*The Auckland Harbour Bridge (AHB), a steel structure which spans the iconic Waitemata Harbour, suffers marine corrosion and weathering problems. Maintenance of its external surface results in discharges to sensitive air, land and water environments which need specific permits (NZ Resource Management Act 1991).*

*Discharges are caused by surface preparation and the application of new coatings. Physical containment methods for controlling discharges were authorized by the Auckland Council, as the regulatory agency, in 2011. While the outcomes sought by this approach were not unreasonable the implementation method for achieving this outcome was prescriptive, inflexible and costly. The cost for containment was estimated at \$65M over 10 years.*

*The NZ Transport Agency and its network contractors the Auckland Harbour Bridge Alliance (Alliance) recently sought a new sustainable solution for maintenance of the AHB. The Alliance sought from Auckland Council new permits that provided greater flexibility in managing discharges while still committing to achieving the same or better environmental outcomes previously permitted. These new permits were gained in December 2014 and the approach reflects improved and changing steel recoating technology, processes, and environmental management to allow for adaption and innovation without excessive statutory burden. A significant reduction in the volumes of material released to the environment through maintenance activities now occurs without physical containment.*

*The paper discusses the environmental issues posed by AHB maintenance, the local regulatory environment, and investigations undertaken to identify ways to reduce contaminant discharges and manage activities in an integrated way. Overall the project has shown leadership both for the Alliance and the Auckland Council. Recently recognized by the New Zealand Planning Institute the project was awarded the 2015 Best Practice Award for Integrated Planning and Investigations. A reflection on how the Adaptive Management Approach taken by the Alliance can be used in Australasia will also be provided.*