



# MAIN ROADS WA 1224 BRIDGE INSPECTION

MANDURAH, WA

INSPECTION - INFRASTRUCTURE

## PROJECT

Main Roads WA (MRWA) Bridge 1224 Level 3 Inspection

## CLIENT

AECOM

## DURATEC CONTACT

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## DESCRIPTION

Duratec was engaged by AECOM to conduct a Level 3 Bridge Inspection of the Port Bouvard Bridge.

The Port Bouvard Bridge was constructed during 1992-93. Post construction testing identified that the concrete quality was not achieved and exhibited microcracking, alkali silica reaction, voids and porosities. MRWA have implemented a program of monitoring the bridge through regular level three inspections at five year intervals and are proactively managing the durability risks.

The latest inspection was initiated as part of MRWA asset management planning. It included comprehensive testing of major structural elements of the reinforced concrete bridge to ascertain chloride ingress, carbonation, alkali silica reaction, permeability and voids.

Data collected from in-situ and laboratory testing was processed and reviewed to compare with previous inspection results and track the performance of the bridge. The report also made recommendations to update the asset management plan for the bridge to help ensure it will achieve its 100-year design life.

## HIGHLIGHTS

- ▶ Produced a comprehensive report on the current condition of the Port Bouvard Bridge.
- ▶ Made recommendations for maintenance actions to ensure long term durability of the bridge.
- ▶ Identified anomalies in the screening of alkali silica reaction that require further investigation.
- ▶ Undertook modelling of remaining service life that indicates that the bridge is not at risk from carbonation or chloride ingress during its design life.



IMAGES (FROM TOP TO BOTTOM)

- ▶ Overview of Port Bouvard Bridge.
- ▶ Core sampling of bridge piers to test for chloride ingress, carbonation and ASR screening