

AUCKLAND HARBOUR BRIDGE

MEETING ENVIRONMENTAL CHALLENGES SUSTAINABLY



Auckland Harbour Bridge

History

- Opened May 1959
- Widened 1969 – ‘clip-ons’



Auckland Harbour Bridge

The Numbers

- **Length:** 1,020 metres (1.2 mins @ 80km/hour)
- **Width of main span:** 244 metres (2.5 rugby fields)
- **Main span clearance:** 43 metres above water
- **Top span clearance:** 63 metres above water
- **Average annual daily traffic:** over 170,000 vehicles
- **Surface area:** 125,000 m²



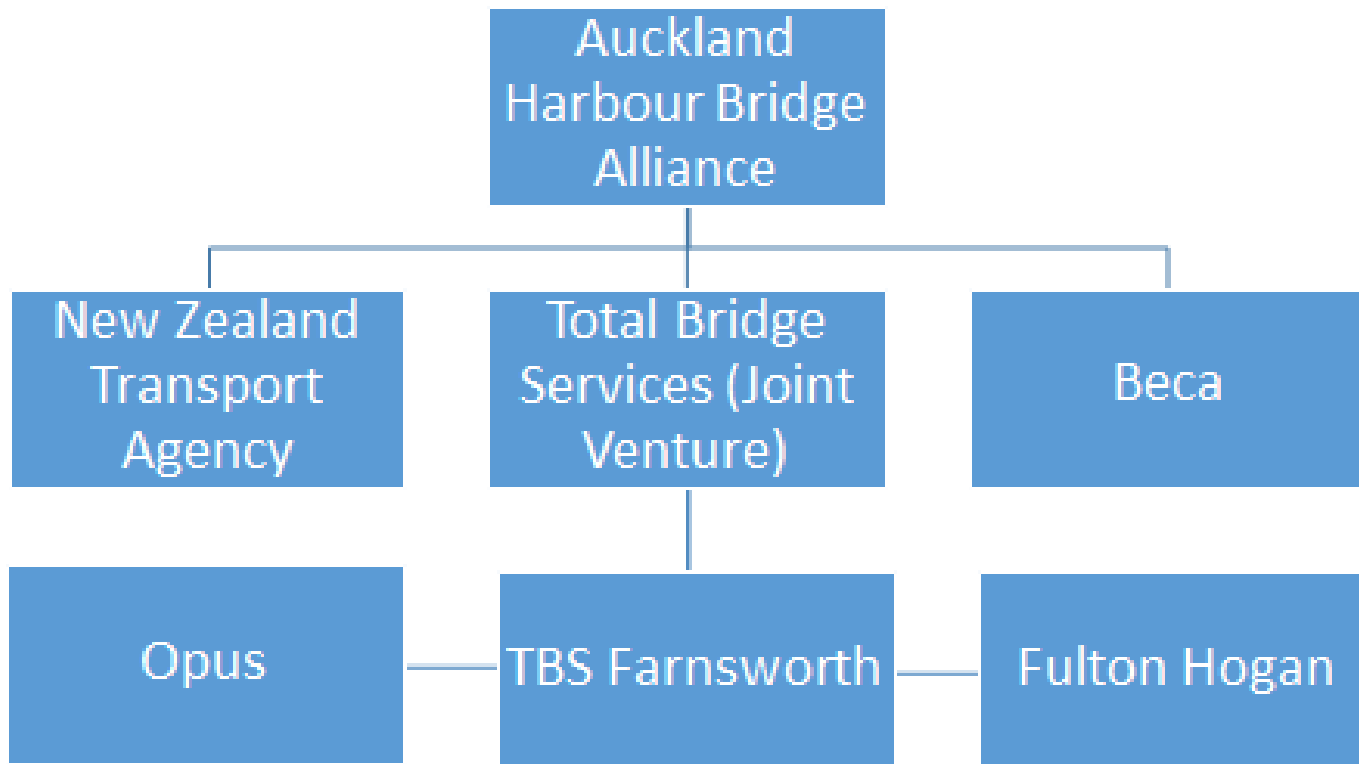
Auckland Harbour Bridge

Environmental Context



Auckland Harbour Bridge Alliance

Participants



Maintenance Activities

Surface Preparation



Maintenance Activities

Recoating



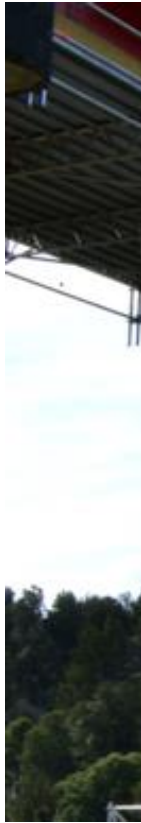
Auckland Harbour Bridge

Regulatory Environment

- Resource Management Act (1991)
- Hauraki Gulf Marine Park Act (2000)
- National Policy Statements and Standards
- Regional Council Planning Documents
 - Discharge of contaminants to coast
 - Discharge of contaminants from dust generating activities
 - Discharge of washwater, wastewater and dry wastes to land

Maintenance Approach

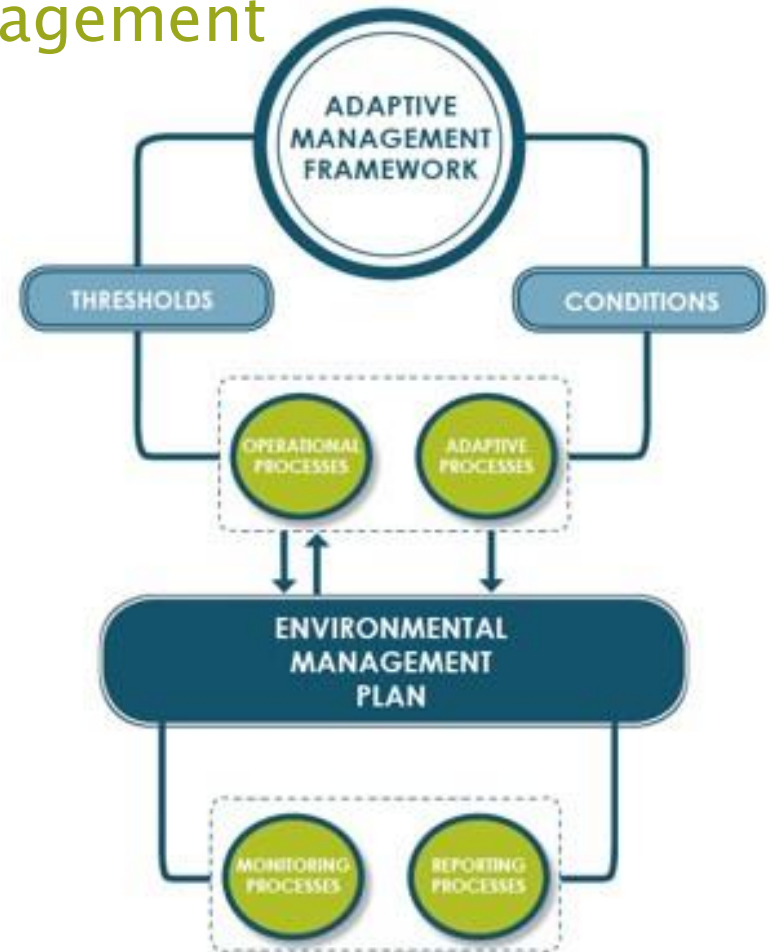
Prescriptive to Outcomes Focussed



Adaptive Management Framework

Innovation in Environmental Management

- Using science to set thresholds
- Flexibility for operational methods, products and activities
- An adaptive process that allows innovation



AHB Maintenance Works Package: Job Completion Summary

Summary of Works Completed

(this section to be completed by the Works Supervisor)

Works Supervisor:

Works Pack ID:

Date: Works started:

Works completed:

Location: Over land | Over coast

Structure:

Span:

Panel Point:

Number of Daily QC Inspection Records attached:

Maintenance Works Environmental Audit carried out? No | Yes **Date (if 'yes'):**

Works Undertaken (tick and complete section):

Water Blasting

Area (m²):

Containment (%):

Wet Abrasive Blasting or

Dry Abrasive Blasting

Area (m²):

Garnet used (kg):

Containment (%):

Spray Painting

Paint used (L):

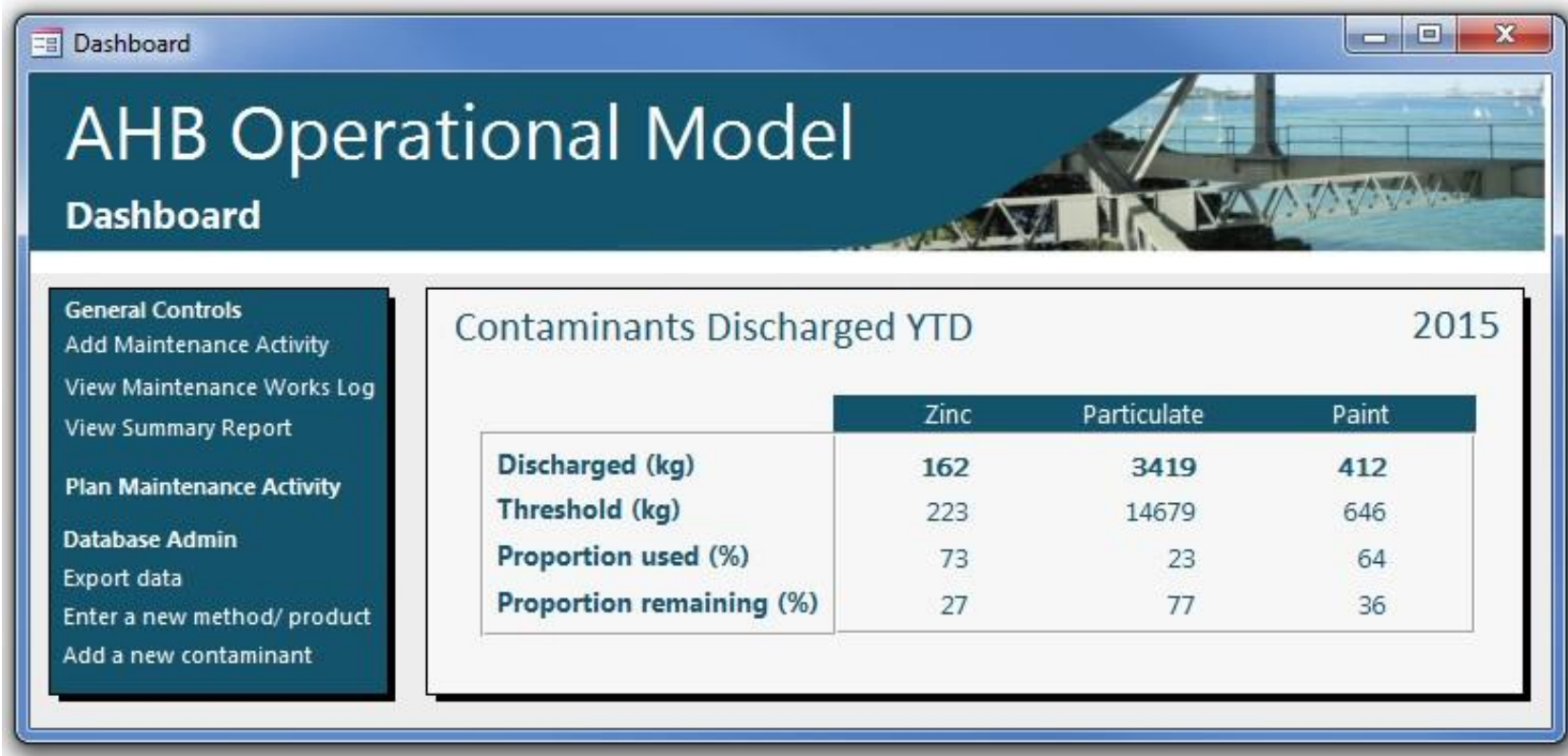
Paint overspray (%):

Containment (%):

Comments:

Innovation in Environmental Management

Implementation and Tools



Dashboard

AHB Operational Model

Dashboard

General Controls

- Add Maintenance Activity
- View Maintenance Works Log
- View Summary Report
- Plan Maintenance Activity

Database Admin

- Export data
- Enter a new method/ product
- Add a new contaminant

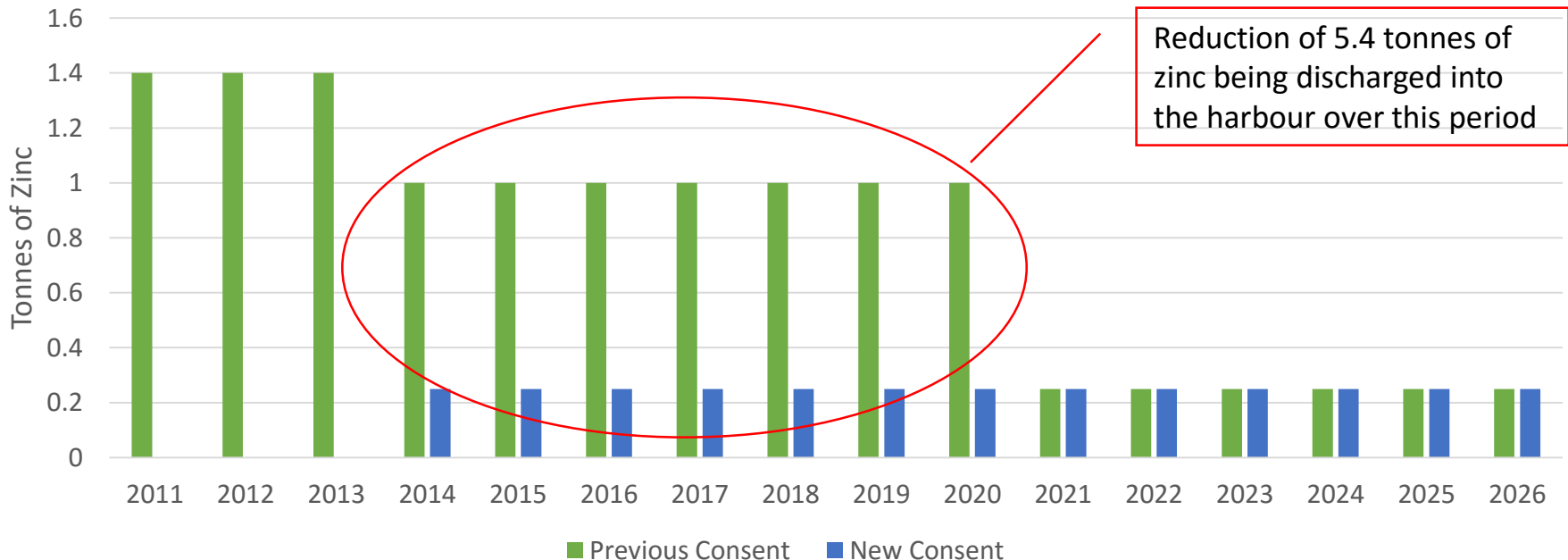
Contaminants Discharged YTD 2015

| | Zinc | Particulate | Paint |
|---------------------------------|------------|-------------|------------|
| Discharged (kg) | 162 | 3419 | 412 |
| Threshold (kg) | 223 | 14679 | 646 |
| Proportion used (%) | 73 | 23 | 64 |
| Proportion remaining (%) | 27 | 77 | 36 |

Environmental Outcomes

Reducing Zinc Inputs to the Waitemata Harbour

Zinc Discharges Authorised by Maintenance Consents



Collaboration and Culture

Improved Performance

- Integrated and collaborative approach
- Significant cost savings
- Focus on performance not compliance
- Supports innovation and continual improvement
- Drives behaviour to reduce environmental impacts
- Recognition through awards

Acknowledgements

Alliance Partners and Subcontractors



Boffa Miskell

