



Auckland Harbour Bridge

Monthly Performance Report

December 2021
January 2022

Our Report



Achieving our Vision

ASM Vision

The ASM role is to enable these Government objectives through an operations and maintenance of the Auckland State Highway Network.

Our vision is:

Connecting our communities, making every day better

Strategic Priorities

What we will implement to achieve our 10 year ambitions?

No boots on the ground in line of fire

Road to zero

Energy efficiency

Technology as an enabler

Operational excellence

Proactive leadership (beyond assets)

Level of service optimisation

Data led customer insights

Workforce of the future

Our vision is: ***Connecting our communities, making every day better***
Our strategic priorities focus on what are the most critical levers we can pull to achieve a step change against our 10 year ambitions.

What will our strategic priorities focus on?

What we will do to achieve our 10 year ambitions aspirations?

Using engineering, barricades, drones, sensors and robotics to physically segregate or remove our workforce from hazards that could kill or seriously harm them

Adopting a safe systems approach in partnership with Waka Kotahi to put fail safe controls in place to ensure that the community cannot be killed or seriously harmed on the land transport system

Upgrading our fleet, increasing recycling and changing the way we work to reduce carbon emissions

In partnership with Waka Kotahi, using technology to provide safe, reliable and connected journeys and enhance how we maintain and operate the network.

Promoting continuous improvement in our work practices so we become the most efficient operations and maintenance business in Australasia

Working proactively with Waka Kotahi to improve safety, amenity and movement

Adopting a multi-criteria approach to service levels which balances needs of assets, the community and cost

Implementing decision support systems, artificial and business intelligence, to help us better understand and influence customer behaviour, enhance operational decisions, and influence planning and investment decisions

Recruiting, training and shaping a workforce and progressive culture which promotes innovation, continuous improvement, customer focus, future needs, and diversity



Dashboard



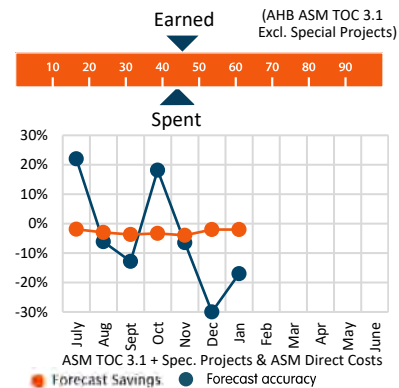
01 Performance

Safety

1 H&S Incident (1 closure Breach)

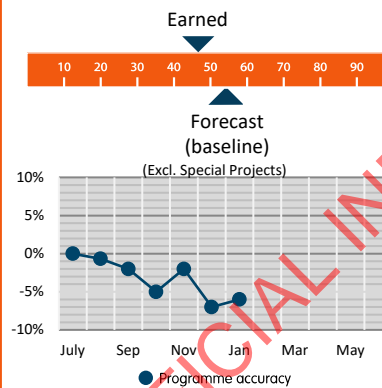
Financial

Expenditure to date

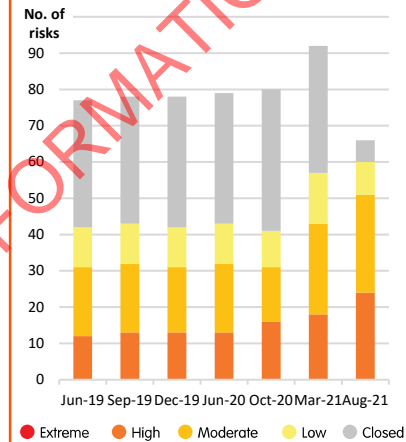


Programme (TOC 3.1)

Progress



Risk



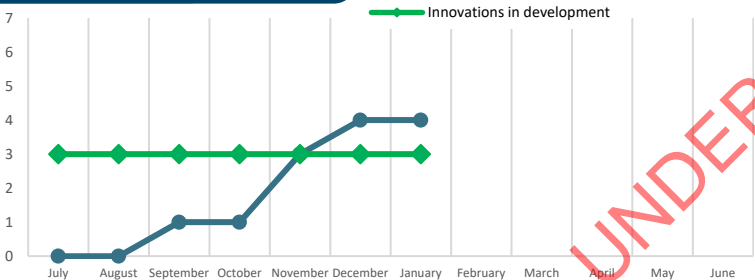
Environmental

1/0 Environmental Incidents
0/0 Environmental OFIs
0/0 Improvements Noted



02 Value

Innovations



0 New Idea OFIs

0 New Innovations in Development/Concepts

§ 9(2)(i)



Performance

01

Performance

1.1

Health, Safety, Environment & Quality

Visit Dashboard



Health and Safety

- A closure breach was reported in January. This incident is currently being investigated.
- We are working under ASM COVID 'Red' Protocols and our business continuity plan. Access to the site office is currently restricted and masks must be worn when with 2m of another person. Return to work Rapid Antigen Testing was completed with no positive readings.
- Random D+A testing was undertaken during the 'Christmas Closure' works with no failures.
- Dangerous Goods Stores – Renewal of Certificate of Compliance has been delayed due to additional administrative actions being requested, by the external auditor, late in the process. Actions are all well progressed and should be closed out within coming month.

Site hours worked	December January	3762 6433	Number of employees (FTE)	28
Lead Indicators			Lag Indicators	
Drug or alcohol tests (random test completed during Resurfacing)		1 / 0	Fatal injuries	0
Positive D&A tests		0	Notifiable injuries	0
Site health and safety audits		1 / 0	Lost time injuries	0
Near Miss/Close call		0 / 1	Medical treatment injuries	0
			First Aid injuries	0
			Injuries with no treatment	0
			Serious environmental incident	0
			Service strikes	0
			Property damage	0
			Staff on reduced time/alternate work duties	0

Environment

- Compliance - CSVue 100% for December and January - an annual report of discharges resulting from maintenance activities is due for submission in February. December entries are to be completed in early February and containment updated
- The AHB Resurfacing EMP was updated ahead of the AHB resurfacing works to reflect the current Chemco system used. A construction noise comparison was also completed to confirm the relevance of existing noise controls for resurfacing works.
- Wet abrasive blasting was undertaken overland without sufficient containment during the Edge Barrier Repair works. As per resource consent conditions, Council was notified and an internal investigation was completed. This incident has been closed out with Council who were happy with the process that was followed.
- An environmental audit of the Surfacing works was completed.
- A 10-year report is due in February to be submitted to Council on the regular structural integrity of the bridge to meet the condition for resource consent 31115. Maintenance Compound audits were completed for January.
- Environmental support was provided to address the audit actions including updating the AHB Spill Response Plan and AHB Compounds EMP.

Quality

- No non conformances to report.

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Programme Overview

- Based on Value Earned, the Core TOC programme (excluding Special Projects) is now 49% complete (37% at end of November last month) vs 58% time elapsed. We are behind on Core TOC programme due to COVID L4 restrictions and diversion of resources the Stringer Half Joint Repairs and the Barrier Upgrade. The Overall value of work delivered is well ahead of the baseline Programme due to the String Half Joint Repairs (reactive work) and the Barrier Strengthening project which were not forecast or planned at the start of the TOC.
- Overarch Coatings renewals has been deferred to next financial year to allow the reactive Stringer Half Joint Repairs to be funded and resourced. This is being formalised through the Change Management Request. Other TOC renewals work is on track.
- There is a risk that some of the Coating Maintenance Programme will also need to be deferred for reasons discussed above.

Structures Asset Management

- Inspections of the Truss bridge rockers, south abutment/anchorage and north anchorage were completed in December/January. Some washout behind the South abutment was identified for further investigation. The ASM Pavements team have been notified to complete sealing of any pavement cracks in this area to reduce water ingress which may be contributing.
- The focus for February/March will be rope access inspections of the lower truss (below walkways level) and access walkways.
- Installation of the dehumidification corrosion protection trial is progressing. Mounting details for the control sensors are being finalised. The dehumidifier unit is due to be delivered and the system switched on in February.
- A process mapping workshop was held in January to model the current inspection and maintenance processes used by the AHB team. The process map will be used to identify opportunities for efficiency through process changes or improved data management.
- A preliminary options assessment for the corroded span 1 central access walkway and watermain support structure has been completed and favours full replacement. A workshop was held with Watercare to discuss findings of the walkway and pipe condition assessments and opportunities for coordinating remedial work. A staged design approach is recommended to review concepts for the replacement prior to detailed design.

Delivery (TOC)

- The primary focus of the delivery team during December and January was the Resurfacing and Barrier Upgrade Special Projects (see overpage)
- Coatings- Roving Team defects have been prioritised and are in progress.
- Stringer Debonding work has commenced.
- King Post Wire replacement works has commenced.



Special and Minor Project Updates

OoS 80 Major Surfacing Renewal

- See Project Highlight.

OoS 82 Gusset Strengthening Design

- HERA's Finite Element Analysis of the strengthening design has been completed. Construction drawings and specifications to be prepared in the new year.

OoS 83 Piers 4 and 5 Concrete Repairs

- Pier 4 (both sides) and Pier 5 West are complete.
- Works are currently being programmed for the Pier 5 East repairs.

OoS 90 & 95 Half Joint NSV & SSV Physical Works

- Demobilisation complete. Galvanising of temporary support frames and production of as-built records outstanding.

OoS 93 Ground Improvement Feasibility Study

- Scope developed and OOS approved.
- Work in progress to determine feasible ground improvement options for the southern approach of the AHB

OoS 94 Overnight Surfacing Repairs

- The patch paved in November (Lane 1, Span 2, Southbound) is showing signs of movement is likely to need to be replaced before this Christmas' closure.

OoS 96 Edge Barrier Strengthening

- See Project Highlight.

OoS 97 Gold Hole Reserve Slope Monitoring

- Installation of survey pegs and baseline survey was undertaken in December. The next monitoring survey is planned for February.

OoS 98 Box Girder Weld Fatigue Improvement Study

- OOS has been approved. The work is to investigate options to improve the fatigue performance of the box girder trough/cross girder weld joints



Lane 1, Span 2, Southbound Patch



1.5 Special Projects

[Visit Dashboard](#)

Project Highlight – Northbound Edge Barrier Strengthening

- The team made a start during night closures in the breakout, blasting and strengthening of barrier posts in November & December.
- On the morning of the 26/12/21 two 12hr shifts began, making full of the 24hr closures on the NB extension.
- The teams utilised a bridge inspection unit, EWP and AHB extension gantries to enable the fitout, bolting and welding on the outside of the parapet and underdeck.
- The crew worked around the resurfacing project, with good communication between teams in order to carry out the works safely.
- No H&S or environmental incidents from the works over the 24hr Christmas/New Year closures which is testament to the good communication and attitudes of staff on the project.
- Overall excellent progress was made during the 24hr closures, and the project is now 85% complete. The remaining works is to be continued at the next block of closures, starting in March 2022. This will be to complete the remaining northbound barrier strengthening and to strengthen the barriers on the southbound flared section.



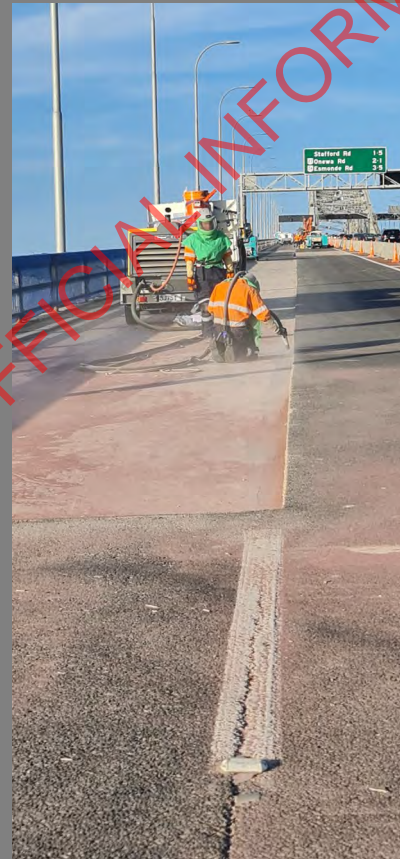


1.5 Special Projects

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Project Highlight– Northbound Resurfacing Project

- Due to COVID related shipping delays, this year's order of epoxy bond coat material failed to arrive in the country in time for the works. As a result, the programmed area of resurfacing, using our epoxy modified SMA system with bond coat in stock, was reduced slightly to approx. 1500 m² (northbound). Following the main works programme, additional smaller patches were treated using Bolidt 'quick set' material.
- Following last year's successful trial, the methodology this year was refined to use water jetting in place of captive shotblasting to achieve the required deck preparation standard. The primary benefit to this method is reduced programme.
- The works generally progressed as planned. The night shift of 28 December was cancelled due to rain, but lost time was regained with all five patches successfully paved on the night of 29 December.
- Overall, the project was a success with no H+S, Environmental or Quality incidents. Lanes 1+2 northbound lanes were reopened to traffic as programmed for the morning of 9 Jan 2022.





Photos from the 21/22
Major Resurfacing
Project

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Value

02



Innovations Implemented

Project

Details

Value | Benefit

Box Girder Resurfacing Methodology Improvements – Water Jetting in Place of Captive Shot Blasting

As reported in Jan 21, membrane removal via water jetting trial was trialled during the resurfacing 20/21.

Following a revision of the deck preparation specification, during this year works (Dec 21), this new methodology was fully implemented, with no shot blasting used. This method is quicker and more reliable than the previous method.





Stakeholder Relationships

03

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03 Stakeholder Relationships



3.1

Stakeholders

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Watercare

- On 27th January a workshop was held to share findings from recent watermain and its supporting walkway inspections, and to discuss options for repair or replacement of these assets. A collaborative approach to these two related projects is likely to result in a better, more cost effective solution.
- Watercare and their contractor have also been working on site to repair a significant leak at an expansion joint.

Panuku Sewer Pump Station

- Erwin Atienza is working with Panuku, to achieve mutually beneficial outcomes, for a planned sewer pump station to be located at the south end of the AHB. This pump station will be used by the AHB south compound. It is proposed that in s 9(2)(g)(i)

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