

AT's TNFD journey: Building resilience through integrating nature into transport infrastructure design



Presented by: *Abby Sharma (Principal Environment & Nature-based Resilience Specialist)*
Transportation Conference 2026
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Mega-flooding warning from top climate scientist: Have we had our last classic Kiwi summer?



Neil Reid

Senior reporter · NZ Herald · 17 Feb, 2026 11:21 AM · 7 mins to read

NZ in 'state of emergency' following record-breaking storm

New Zealand's Emergency Manager has described parts of the country's north island as looking "like a war zone" after enduring brutal storms for the last 48 hours. Sarah Neesh reports.



Record-breaking torrential rain caused by the collision of two areas of 'low pressure' over the Taranaki Sea and Cook Strait has caused widespread flooding and landslides along the west coast of New Zealand's North Island.

Extreme rainfall events a 'peek into the future', climate experts say

By Kate Hester, Climate Change Commissioner
@kate.hester@ecan.govt.nz



Flood-prone Canterbury tops nation's emergency tally

By Liz McWhannell, The Press
@liz.mcwhannell@the-press.co.nz



Liz McWhannell reports Canterbury continues to be hit by flooding and mudslides on Tuesday.

Severe heatwave envelops South Australia as Victoria braces for record-breaking weather and fire threats

Residents near Otways fire in Victoria urged to prepare to evacuate, while Ouyen and Mildura forecast to record 49C on Tuesday.
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Storm's Death Toll Climbs as Officials Warn of Frigid Cold Ahead

All four 22 deaths were attributed to the weekend's snowstorms. More than 700 homes and businesses, particularly in the South, remained without power on Monday and officials said it could take days to restore it.

Published on 20/02/2026 · Updated on 20/02/2026



France on record flood alert as storms slam Spain with deadly winds



Copyrighted Photo

By Jacky Flores-Basso
Published on 16/02/2026 · 09:10 GMT+1

Local News

Los Angeles businesses and freeways flooded after heavy rain soaks SoCal

By Dean Fiorese

Updated on: February 17, 2026 / 6:28 PM PST / CBS LA

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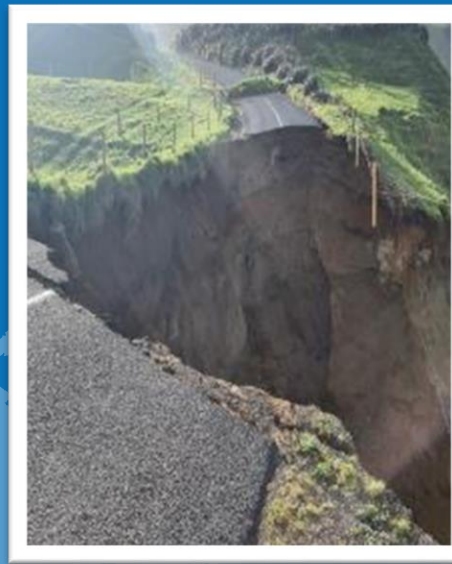


Heavy flooding on the 101 Freeway in Los Angeles on Feb. 16, 2026.

CBS LA



Transport services and infrastructure at the frontline of climate-nature crisis



...and locally (Auckland Anniversary & Cyclone Gabrielle (2023))

Globally...



Integrating Nature with Climate & People



INTERACTIONS BETWEEN CLIMATE CHANGE, PEOPLE AND NATURE

Climate change drives nature loss

Climate change has direct impacts and can worsen other stressors. Impacts include higher temperatures, worse extreme events and sea-level rise.

CLIMATE CHANGE

Human activities drive climate change

Activities include burning coal, oil and gas for energy, conversion of natural ecosystems and high greenhouse gas agricultural systems.

Natural systems help regulate the climate

White ice and snow reflect sunlight; oceans absorb heat; oceans and plants draw down CO₂ from the atmosphere.

Climate change affects people

Existing impacts and future risks include melting ice, sea-level rise, worsened extreme weather events, land degradation and reduced food security.

Nature loss drives climate change

Land-use conversion of natural grasslands, forests and wetlands can release stored carbon as CO₂ into the atmosphere.

Nature-based solutions

Nature-based solutions can contribute to climate change mitigation, resilience and adaptation with co-benefits for nature. Examples include ecosystem-based adaptation, sustainable land management, and halting natural ecosystem conversion.

Human activities drive nature loss

Non-climate stressors include habitat destruction, over-exploitation and pollution.

People can protect and restore nature

For example through protected areas, ecosystem restoration and rewilding.

PEOPLE

NATURE

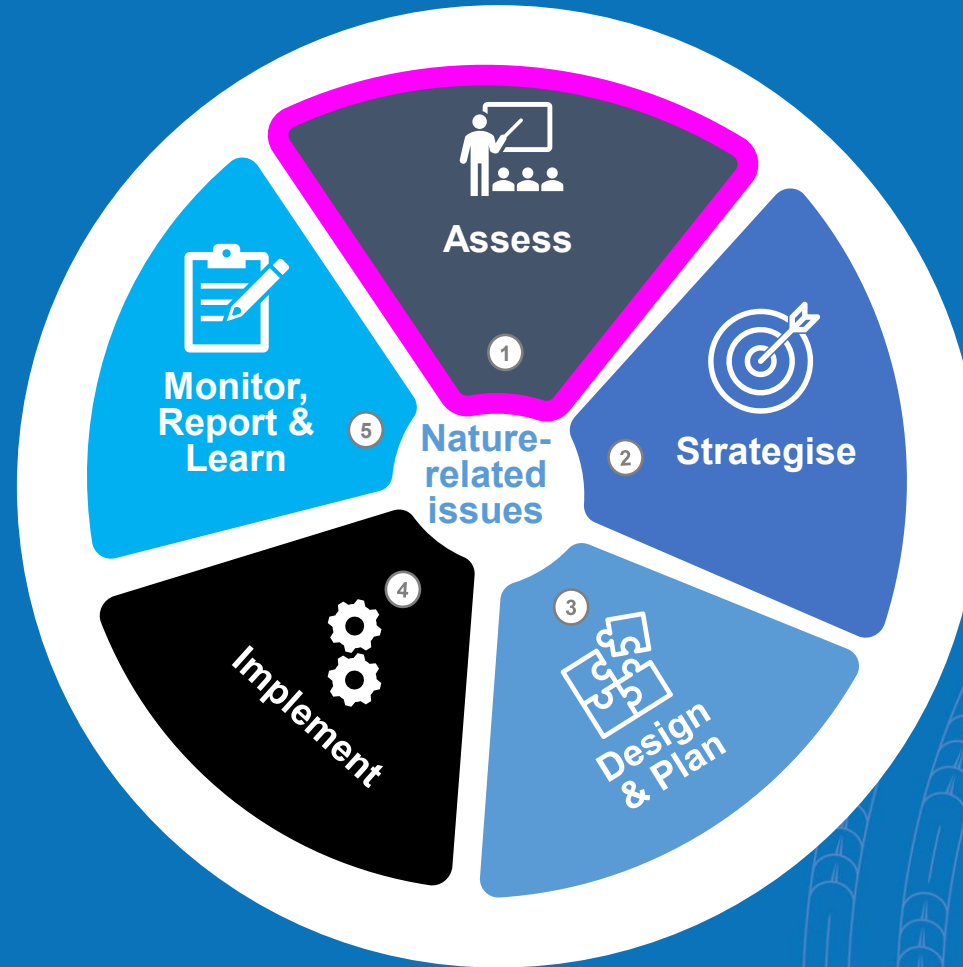
Nature provides contributions to people

Non-climate contributions include food, energy, medicines, spiritual and cultural identity and resilience to floods and storms.

Based on the IPCC SRT 5, SRCO, and SROCC and the IPBES Global Assessment



It starts with building an understanding



Why is nature important to Auckland Transport?

Overarching Objective

Recognise our nature-related impacts and dependencies to facilitate informed decision-making and preparation for nature-related disclosures.

— Nature within AT's frameworks





Taskforce on Nature-related
Financial Disclosures



AT aligned with TNFD recommendations



Locate and evaluate AT's impacts and dependencies on nature



Assess nature-related risks and opportunities to AT's business model and strategy



Prepare for disclosures



AT's TNFD approach to assessing nature's impacts and dependencies

Business span

Identified AT's **business activities** across direct operations and value chain

Nature impacts and dependencies

Located AT's nature impacts and dependencies:

- **Nature Contributions to People**
- **Te Ao Māori Principles**
- Identified **biomes and ecosystems** of high relevance

Materiality assessment

Identified **material activities and material impacts and dependencies** on nature

Nature risks and opportunities

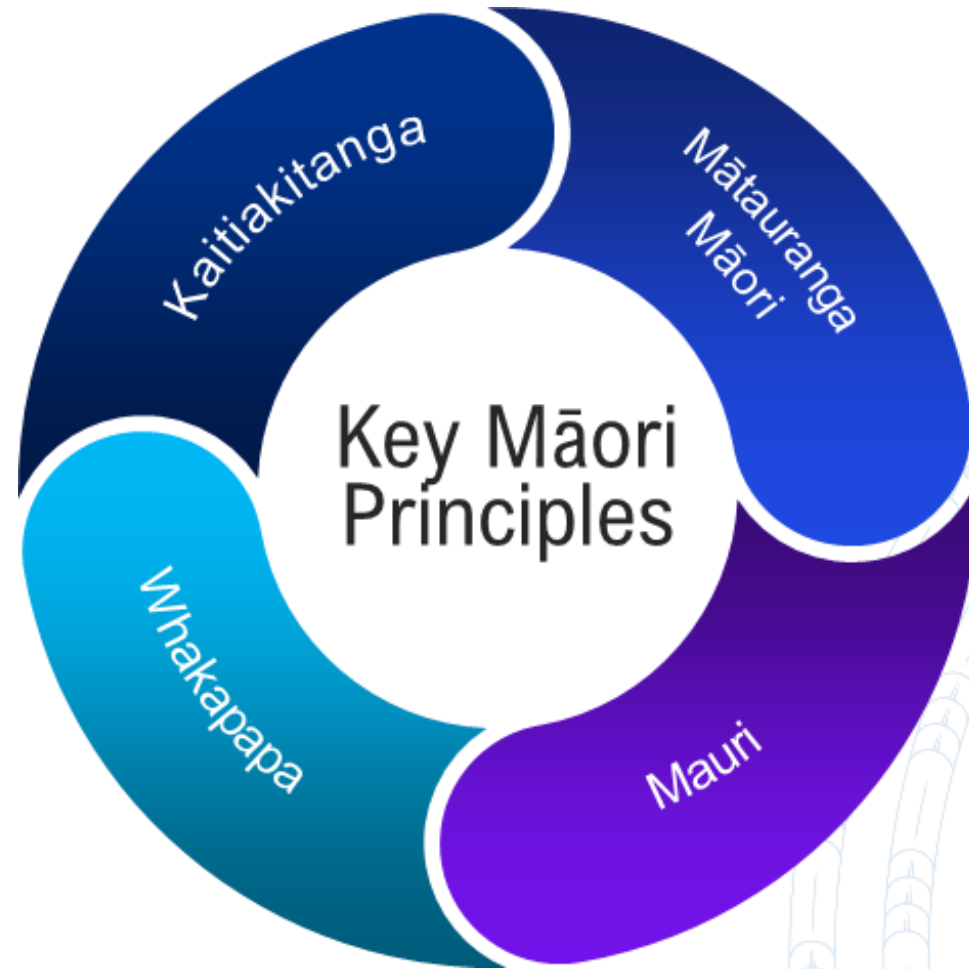
Identified **risks and opportunities** that arise from **material impacts and dependencies** on nature

AT's nature impacts materiality heatmap

Highly material AT's activities	1. Habitat creation and maintenance	2. Prevention and disposal of waste and other pollutants	3. Regulation of air quality	4. Regulation of climate	5. Regulation of ocean acidification	6. Regulation of soil health	7. Regulation of freshwater and coastal water quality	8. Regulation of biodiversity, location and timing	9. Regulation of freshwater and degradation of this and seabeds	10. Regulation of marine and estuarine ecosystems	11. Energy	12. Food and feed	13. Materials and assistance	14. Materials, biochemical and genetic resources	15. Learning and innovation	16. Physical and psychological well-being	17. Supporting services	18. Maintenance of oceans
Road operations																		
Building footpaths, road carriageways, curbs, cycle paths																		
Lane markings painting																		
Lane markings repainting, wear and tear																		
Operation and maintenance of streetlights																		
Maintenance of curbside footpaths, road carriageways, curbs, cycle paths																		
Buses maintenance																		
Operating and maintaining public transport facilities - Buses																		
Public transport operations/transport of people - by bus																		
Purchasing/introducing trains																		
Trains maintenance (Wiri)																		
Trains maintenance (train washing)																		
Operating and maintaining public transport facilities - Trains																		
Public transport operations/transport of people - by train																		
Ferries refuelling																		
Operating and maintaining public transport facilities - Ferries																		
Public transport operations/transport of people - by ferry																		
Planting vegetation																		
Maintaining/replanting berms, ecological corridors, trees, green walls, and green roofs																		
Operation and maintenance of GPTs/catchpit filters																		
Operation and maintenance of soak pits																		
Building culverts																		
Operation and maintenance of culverts																		
Operation and maintenance of bio-retention devices (maintenance - Healthy Waters)																		
Operation and maintenance of ponds and wetlands																		



AT, a front runner: inclusivity of Te Ao Māori Views in TNFD

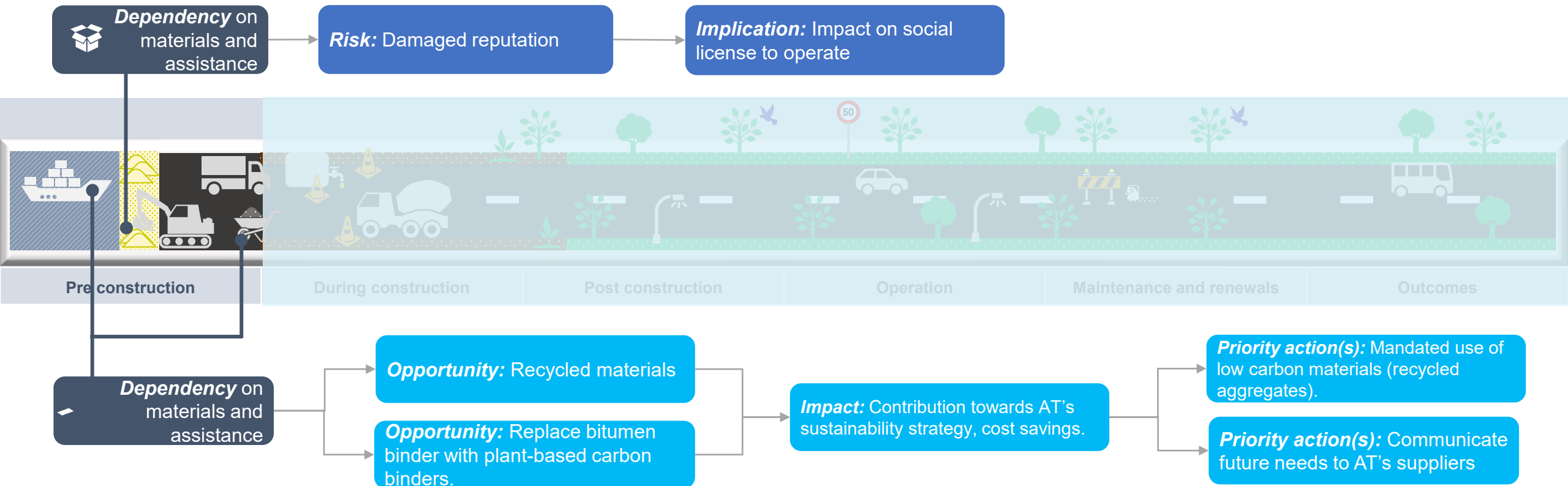


AT's approach to assessing nature's Road Network Value Chain

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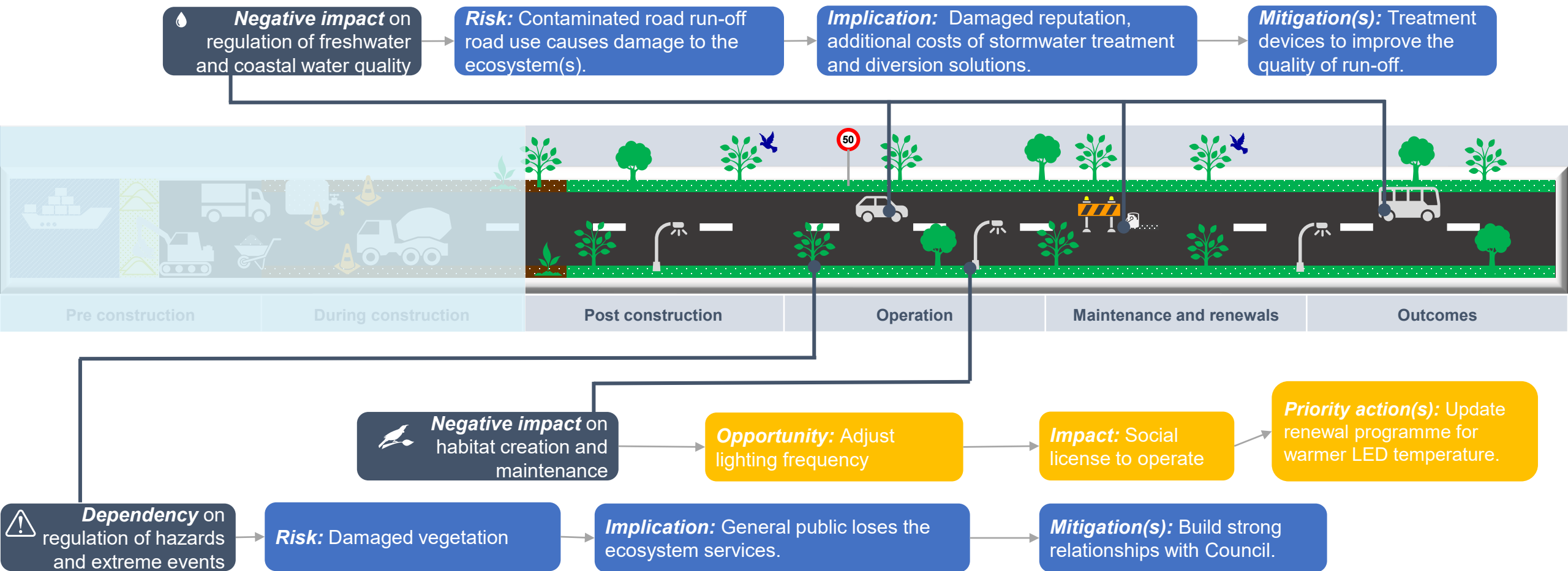
■ Risks

■ Opportunities



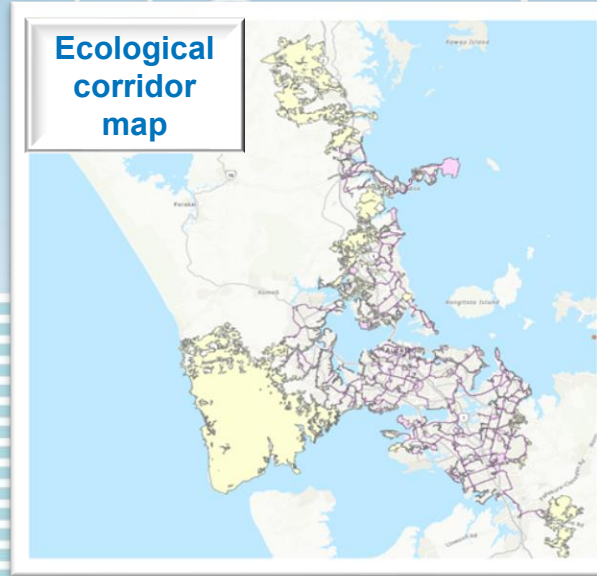
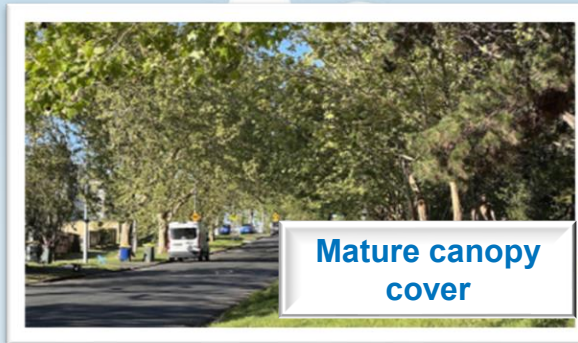
AT's approach to assessing nature's Road Network Value Chain

KEY:
■ Risks
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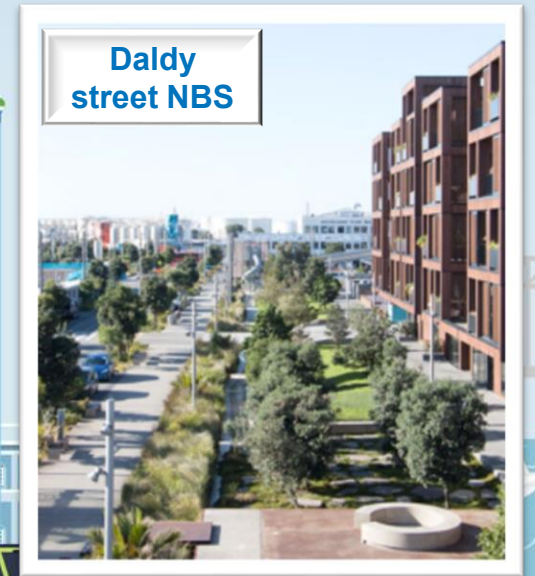


Take-home messages

- Nature **underpins** our economy.
- Nature and Climate are **inherently connected**.



- AT trialling the TNFD framework.
- AT recognises impact and dependencies on nature.
- Development of **new nature-positive** and **holistic approach**.
- Taking **nature-positive** action is an **investment** not a cost.



A lush green forest with a stream flowing over mossy rocks. The scene is filled with vibrant green foliage and sunlight filtering through the trees.

**Ngā mihi nui ki a
koutou
धन्यवाद
Thank you**