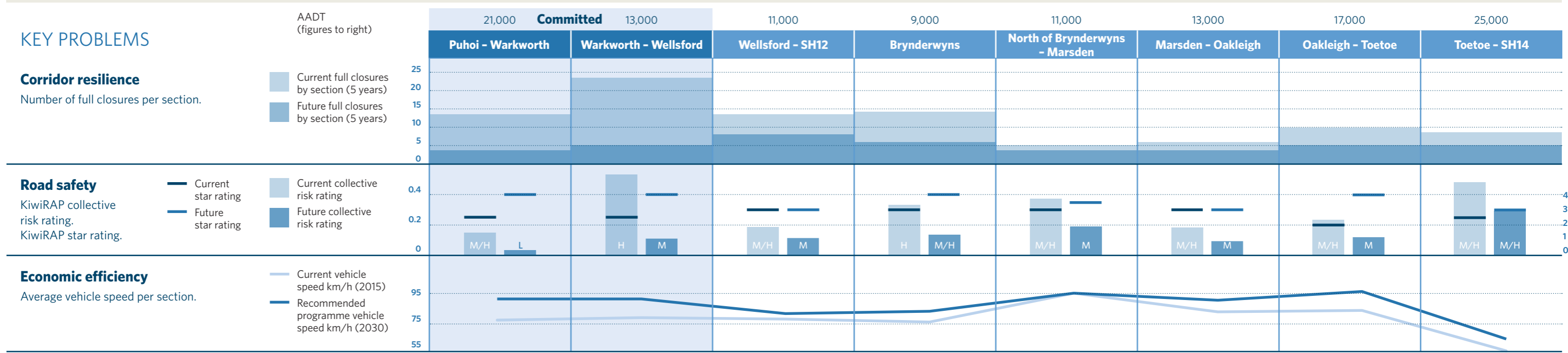
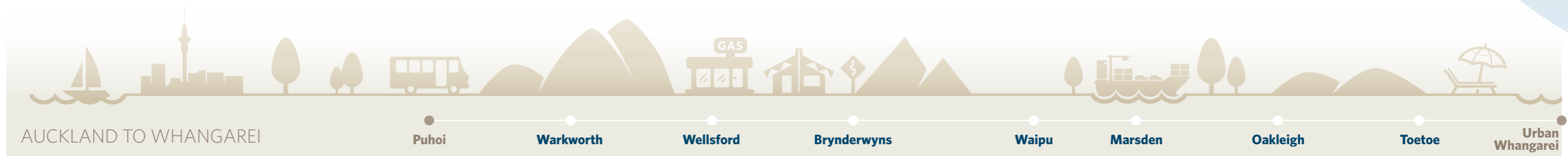


SH1 AUCKLAND TO WHANGAREI RECOMMENDED PROGRAMME



RECOMMENDED PROGRAMME

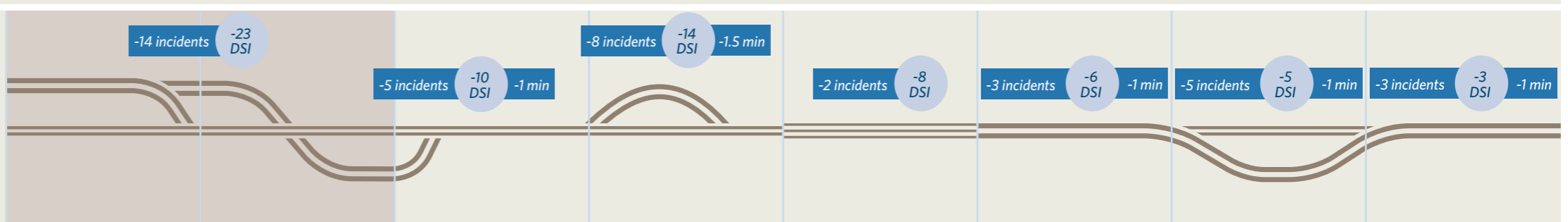
Section	Activity	Timing	Cost	BCR range	Interim activity	Long term activity
Puhi to Warkworth RoNS	Online Improvements	Second priority	\$25-30m	0-1	Minor safety improvements \$5-\$10m	
Warkworth to Wellsford RoNS	Online Improvements	Second priority	\$450-730m	0-1	Dome Valley online safety improvements \$5-\$10m	
Brynderwyns western bypass	Online Improvements	Second priority	\$25-45m	0-1	Minor safety improvements \$5-\$10m	Wellsford to Marsden IBC
North of Brynderwyns - Marsden	2+2 online upgrade and SH1/15 intersection upgrade	Second priority Third priority	\$140-210m	1-3		Marsden to Whangarei Triangle IBC
Marsden - Oakleigh	2+2 offline upgrade	First priority	\$160-280m	1-3	Loop Road intersection upgrade	
Oakleigh - Toetoe	2+2 upgrade of missing sections	First priority	\$30-50m	3-5		

Outcomes Excluding RoNS

- 69 Fewer deaths and serious injuries over 5 years
- 41 Less closures (per 5 years)
- Mean operating speed of **82km/h** by 2030
- 6 min** Average travel time saving (Te Hana to Whangarei), trucks approx. 10+ min.

Programme investment profile
H/H/0.6-1.0
Programme cost range
\$880m - \$1.4b
over 30 years

The recommended programme is a combination of on and offline enhancements as well as a number of operational interventions. The Puhoi to Wellsford RoNS are assumed in the Do minimum.



SH1 AUCKLAND TO WHANGAREI

The Tai Tokerau Growth Strategy (2015) has brought a whole of Government approach to tackle the economic challenges facing Northland. Connecting Northland through better transport links is a significant opportunity for the region and a critical action within the Northland Economic Action Plan (2016).

Connecting Northland is an integrated transport approach which recognises the importance of improving transport access within a multi-modal environment.

The vision for the Auckland to Whangarei state highway corridor is a safe corridor which provides reliable journey times to support the economic growth of the region and access to key markets.

As part of an integrated transport system, access to Auckland (including the airport and inland ports) and Northport to support distribution of freight is required. This includes the potential for rail access to the port in the future.

A suite of non-infrastructure measures to support Northland communities such as access to driver licensing and education programmes are included as a key part of the recommended programme. Investment in the corridor will address three critical problems: a poor safety record with a high number of deaths and serious injuries; frequent unplanned events resulting in significant detours; and the lack of a long term, integrated investment approach which creates

suboptimal outcomes in transport and reduced economic investment in Northland.

The corridor experiences a higher cost of moving freight as a result of the poor alignment and journey times which are not competitive with other regions.

Progress towards the long term vision will be prioritised based on need and return on investment. Four major infrastructure schemes have been identified to progress to construction in the next 30 years:

- A dual carriageway between Whangarei (SH14) and Port Marsden Highway (SH15a)
- A Brynderwyn Hill bypass
- Warkworth to Wellsford RoNS
- Puhoi to Warkworth RoNS

Safety and operational improvements on the remaining sections will be progressed as well as reducing the impact of traffic on townships and upgrading existing detour routes.

The programme delivers confidence in travel times for the freight industry supporting investment in the northland economy. Improvements to the transport corridor attract domestic and international tourists providing benefits for the communities of Northland. The result is that Northland is better connected by a corridor which is safe, resilient and enables economic development.

CONNECTING NORTHLAND

Around 2 million tonnes of freight moves between Northland and Auckland each year. Tourism in Northland accounts for \$1 billion a year.

The State Highway 1 corridor is therefore a vital link between Northland and the rest of the country for freight and tourism.



PROGRAMME MULTI-CRITERIA ASSESSMENT

The programmes are different combinations of activities. Alternative programmes were developed and assessed against the investment objectives and other criteria.

		Programme 1 Resilience	Programme 2 Safety	Programme 3 Efficiency (90 km/h)	Programme 4 ONRC	Programme 5 Alternative modes	Programme 6 Least impact	Programme 7 Stakeholder group 1	Programme 8 Stakeholder group 2	Programme 9 Stakeholders refined	Programme 10 Stakeholder group 4
Outcomes	Investment objective 1: Proportion with viable alternatives	100%	70%	100%	100%	70%	70%	100%	94%	100%	100%
	Investment objective 2: KiwiRAP corridor rating (collective)	0.10	0.14	0.09	0.08	0.14	0.14	0.08	0.10	0.10	0.08
	Investment objective 3: Cost of travel (mean vehicle speed km/h)	81.7	78.5	84.8	86.6	79.7	79.7	81.7	82.5	82.1	86.6
	Approximate travel time saving on corridor (min)	5.0	1.4	9.5	11.9	2.6	2.6	6.0	6.4	5.6	11.9
	Reduction in DSI's per 5 years	85	77	91	99	64	64	99	85	86	99
Other factors	Feasibility	++	0	+++	+++	0	0	+++	++	++	+++
	Affordability	-	-	-	--	-	-	-	-	-	-
	Public / Stakeholders	-	0	--	--	--	-	--	-	0	-
	Cultural, social and environmental effects	0	-	+	+	-	-	+	+	+	+
	Safety	-	0	-	-	0	0	-	-	-	-
	Economy	++	++	++	++	+	+	++	++	++	++
	Overall MCA ranking	7	8	3	1	10	9	6	5	4	2
Cost (\$m)	Cost estimate (upper and lower bound)	\$960-\$1530	\$430-\$730	\$1930-\$2800	\$2170-\$3200	\$6460-\$8670	\$430-\$640	\$1500-\$2430	\$820-\$1310	\$880-\$1430	\$1700-\$2450
BCR	Benefit cost ratio	0.5-0.8	0.5-0.9	0.3-0.4	0.3-0.5	0.1-0.1	0.8-1.2	0.3-0.5	0.5-0.8	0.6-1.0	0.4-0.5

Whilst only ranked 4th in the MCA analysis, programme 9 was selected as the recommended programme as it delivers the outcomes sought for the corridor in the most economically efficient manner. Programme 9 delivers 85% of the benefits of the top ranked programme for 45% of the cost. Programme 9 delivers a safer, more resilient and efficient transport connection between Auckland and Whangarei.

Recommended programme

TRIGGER POINTS

Trigger	Time	Uncertainty	Impact on programme	Comments
Growth forecasts Whangarei changes. Marsden Point increases population and employment	5+ years	Reasonably foreseeable	Medium	Accelerate or slow the timing of need for Whangarei to the Port intervention
Changes at the Port: bigger containers or bulk goods import role at Northport changes	Post 2020	Hypothetical	Medium	Increase the need to invest in the corridor
Change in rail mode share as a result of pressure on the urban rail section through Auckland City	Post CRL	More than likely	Medium	Cost of rail trip through Auckland area increases and drives more freight to the road. This will increase the need for investment in the road corridor

STAKEHOLDERS INVOLVED IN THE PBC

Stakeholders are well aligned on the recommended programme, although engagement is ongoing.

- Far North District Council
- Northland Regional Council
- Whangarei District Council
- Northland Inc.
- Kaipara District Council
- New Zealand Police
- Kiwirail
- Auckland Council
- Auckland Transport
- Northport
- Forestry Logistics
- National Road Carriers
- Freight User Group

IMPLEMENTATION PARTNERS

We will partner with a range of organisations to deliver the recommended programme:

- Auckland Transport
- Auckland Council
- Kaipara District Council
- Whangarei District Council
- Northland Regional Council
- New Zealand Police

