

## Whangārei to Dome Valley Resilience Strategic Response Outcomes, Programme Phasing and investment profile

The Programme is designed to maintain and improve corridor resilience between Whangārei and Auckland, through minimising both the likelihood of a natural hazard event resulting in the closure of SH1, and the duration that the highway will be closed. The lack of robust alternatives to SH1, particularly for freight, has been addressed by upgrading some of the critical detour routes to enable temporary but appropriate heavy vehicle access to maintain connectivity into and out of Northland, keeping people and goods moving during critical events.

Measures are considered short to medium term treatments to maintain an appropriate level of service for a National Strategic Highway that has no/limited alternative accesses.

The longer-term strategy for the corridor will be developed early in this resilience programme through the Whangārei to Te Hana Single Stage Business Case. This has been prioritised to enable all short and medium term measures to build towards this long term direction therefore minimising re-work and abortive work. In the draft GPS 2024 the Government identified strategic investment projects for the Warkworth to Whangārei corridor. Realistically, these long term solutions will be 10+ years away and so there is still an immediate resilience need in the short to medium term to make the existing network as resilient as possible.

Projects (or stages within projects) have been grouped into two phases for delivery:

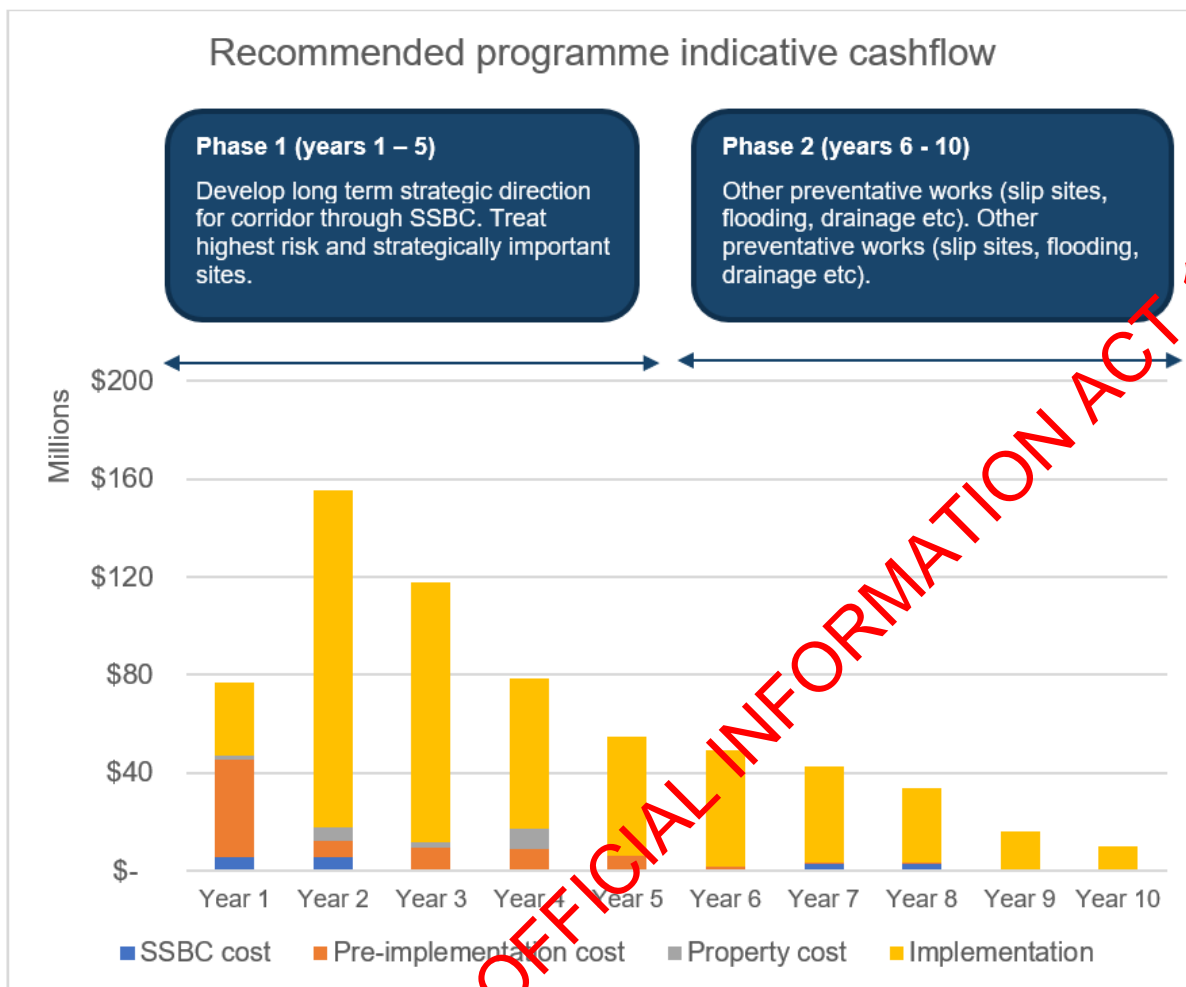
### Phase 1 (years 1 – 5)

- Whangārei to Te Hana Single Stage Business Case (SSBC) to determine the Long-Term Strategic direction of the corridor (\$41m)
- Upgrade of four detour routes to be suitable as alternative HPMV routes: Oakleigh Road/Paparoa Road, Mangawhai Road/Cove Road, SH12/SH14 and SH16/Woodcocks Road (approximately 250km in total). Includes removing geometric constraints and upgrading bridges to two-lane bridges (\$141M) (note: completed in phase 2)
- Slip management works to significantly reduce the number of closures anticipated in Dome Valley (\$190m) and the Brynderwyn Hills (\$57m) to maintain critical access to Northland for people and goods and maintain investor confidence
- Preventative works programme to minimise the road closures along the remainder of the 100km long SH1 corridor such as stream and culvert clearing, culvert and drainage improvements to reduce flooding and road deterioration and slip management. Proactive and improved response measures for customers, though signage and interagency coordination and real time information. (\$81M) (note: completed in phase 2)
- **section 9(2)(g)(i)**

### Phase 2 (years 6 – 10)

- Complete upgrade of detour routes (\$44M)
- Complete preventative works on SH1 (Phase 2 \$77M)
- Implementation business case for Ara Tūhono – Warkworth to Wellsford (\$5m).

Whangārei to Dome Valley Resilience Strategic Response Investment Profile and Phasing



	Phase 1 (years 1 - 5)	Phase 2 (years 6 - 10)	Total
<b>Business Case cost</b>	\$11.2	\$5.0	\$16.2
<b>Pre-implementation cost</b>	\$70.4	\$3.3	\$73.8
<b>Property cost</b>	section 9(2)(g)(i)		
<b>Implementation</b>	\$383.2	\$142.3	\$525.5
	<b>\$483.0</b>	<b>\$150.9</b>	<b>\$633.9</b>



# A more resilient SH1 Whangārei to Dome Valley Strategic Transport Network

Northland recovery - draft emerging programme (under development)

## The challenge

- » Recurrent severe weather events have resulted in declining performance and closures of SH1 between Whangārei and Dome Valley as well as local road detour routes.
- » The geology of the Brynderwyn Hills makes it particularly susceptible to weather events, closures and future challenges (e.g. climate change).
- » Damage to several sections of highways has resulted in significant road closures and disruptions for customers and the wider economy. Emergency works to reopen roads are short-term only.
- » Given the reliance on the state highways the levels of disruption, severance and isolation occurring are untenable for communities and industry. The region has a high Māori population, high level of socio-economic deprivation, significant tourism economy and freight activity.

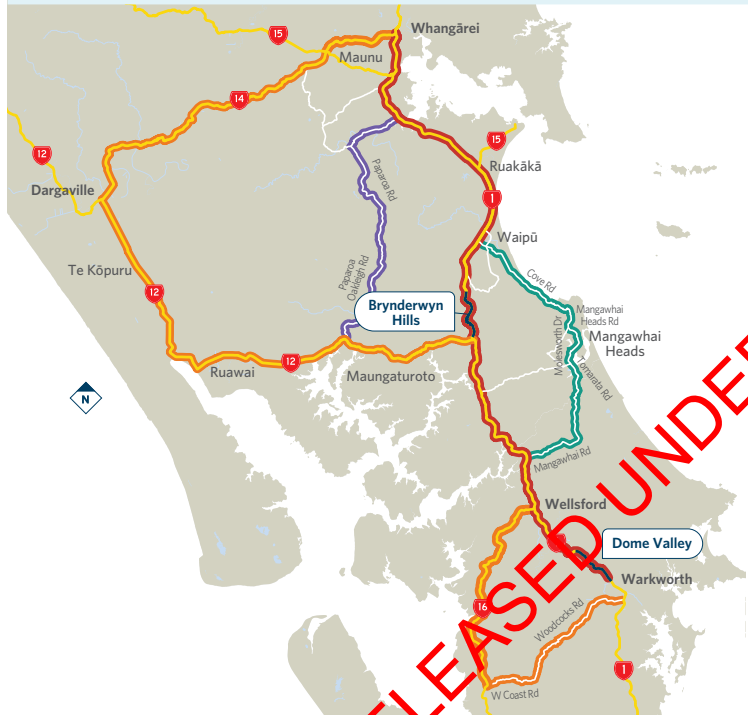
## Way forward

- » Waka Kotahi, iwi, hapū and key stakeholders collaborating on the future direction of the regional transport system.
- » A step-change in resilient access, and confirmation of funding as options and interventions are further developed.
- » Delivery to be staged with three phases of works:
  - Short term/immediate projects include strengthening detour routes for freight, completing Whangārei to Te Hana SSBC and immediate works on Brynderwyn Hills and Dome Valley
  - Medium term projects include overslips, underslips and slip management along with preventive flooding maintenance with culvert clearing and upgrades
  - Long term projects include long term Whangārei to Te Hana solution (pending outcome SSBC), Ara Tūhono Warkworth to Wellsford (when DBC triggers are met)
- » Straightforward and smaller scale projects start immediately using existing contracting models. The more complex projects require further investigation and public consultation.

## Key outcomes

- » More reliable and equitable critical lifeline access. Enable future disaster response and recovery.
- » Safer and more resilient transport network providing for faster reliability of access for freight.
- » Future recovery works in response to events avoided through proactive works.
- » Partner with iwi and hapū to understand aspirations, and to support local businesses and job creation during rebuild.
- » Increased confidence to invest, retain and grow employment, increase tourism, and attract industry due to transport investment in region.

- Northland industry contribution of \$8B GDP annually
- Key sections of SH1 closed for 73 days in early 2023.
- Contractor claims exceed \$10 million for Brynderwyn Hills and Dome Valley emergency response so far this year.
- 30% Māori population in Whangārei district and 25% in Kaipara district



## Recommended programme

Indicative programme costs for the short and medium term interventions are **\$600-800million**, inclusive of property. Costs for longer term works are not included in this figure and will be confirmed through the business case development.

### State Highway 1 (between Whangārei and Dome Valley)

Maintaining SH1, as the critical lifeline to Northland, is incredibly important given the growth and economic prosperity and confidence in Northland relies on this critical connection. It also provides critical access to NorthPort, higher education, health services and international airport connections, for local people and freight operating on the "just in time" model to serve the North.

Targeted investment to remove current deficiencies and deliver resilient access by increasing maintenance and rebuilding infrastructure to standards that will withstand future events in the immediate to medium term.

#### Recommended programme includes:

- » Confirming the long-term infrastructure solution by completing the Whangārei to Te Hana SSBC with our mana whenua and Council partners in the immediate/short term
- » Undertake route protection for the long-term solution in the medium to long term
- » Significant immediate/short term enhancements (drainage, slip prevention) to the Brynderwyn Hills
- » Enhanced overslip, underslip and slip management across both the state highway and local road network using the design already being completed through the emergency funds
- » Prioritised preventative flooding measure through culvert management and upgrades for the Brynderwyn Hills and Dome Valley
- » Non infrastructure solutions like enhanced signage, variable messaging signs and sensors to monitor slips.

### Local road detour - Oakleigh Road - Paparoa Road

Targeted resilience enhancements to provide temporary HPMV access alternative to SH1 that is constructed to modern standards and will withstand future events.

Potential to expand to include one-lane bridge replacements to allow for temporary HPMV use, route improvements with localised widening, as well as underslip management to maintain availability during weather events.

### Local road detour - Cove Road - Mangawhai Road

Targeted resilience enhancements to provide temporary HPMV access alternative to SH1 that is constructed to modern standard what will withstand future events.

### SH12/14 detour and SH16/Woodcocks Road detour

Minor resilience enhancements with limited works, focusing on maintaining access through flood management, preventative maintenance, culvert investigation, slip and rockfall management.

Proposals and timeframes are subject to further refinement, options assessment, engagement, planning and property acquisition processes.  
 \*Cost ranges are indicative only and subject to funding, further design and investigation. Excludes inflation and escalation.