Marlborough Sounds Future Access

Programme Business Case

Stakeholder Workshop, June 2023

Contents:

Purpose

Brief stakeholders and take questions on the emerging preferred option and adaptation approach

Identify stakeholder preferences

Highlight other ways stakeholders can get involved

1. Background

Four Storm Events Over 13 months

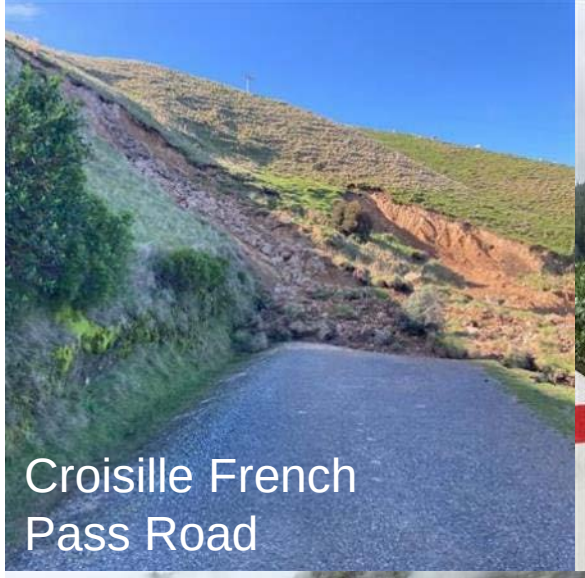
- July 2021, and February, July and August 2022
- 5,420 faults recorded
- $85m funding received for July 2021 event (Phase 1)
- Road LoS prior to events: narrow one or two lane, rural, sealed and unsealed, low safety LoS

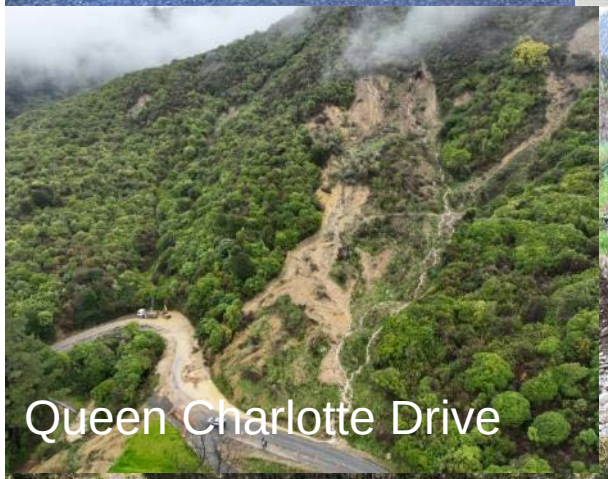
August 2022 event

- Over 3,000 faults recorded
- Wider spread of damage than experienced previously
- Communities cut off; stress and uncertainty; transport a problem
- Concerns expressed about the economic and social sustainability of the Sounds
- $53m funding application (Phase 2) being considered by Waka Kotahi to complete repair works outside of the Sounds and essential repairs only within the Sounds

Today

- This PBC will identify a sustainable long-term solution for safe and resilient transport access to the Sounds
- Phase 1 and 2 funding will address 3,640 of identified faults (1,780 faults outstanding pending outcome of this PBC)





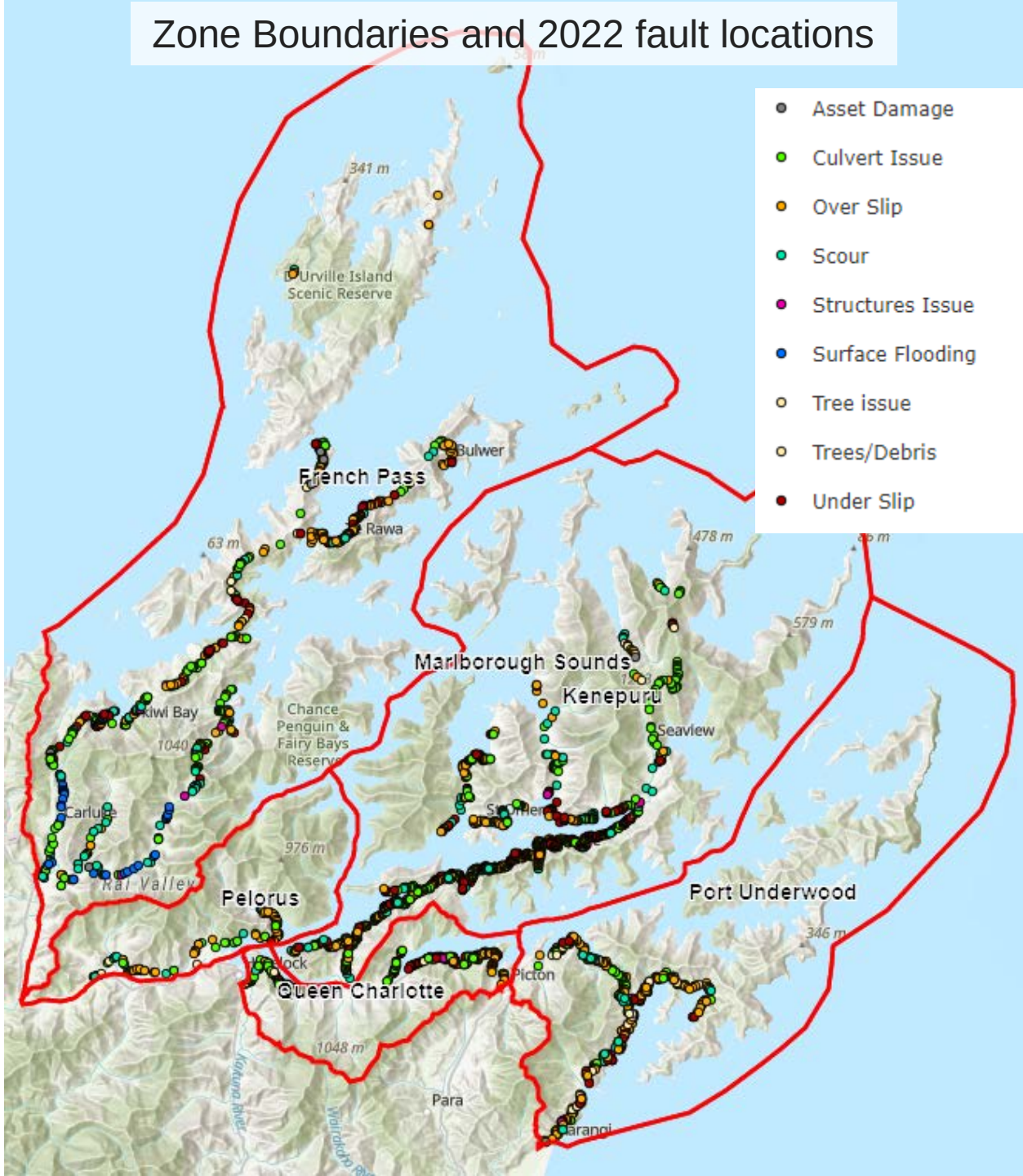
2. Purpose of Study

Why are we doing this study?

- Determine level of service for immediate recovery taking into account future adaptation
- Provide certainty about future access to the Marlborough Sounds
- Identify range of approaches, and recommend the most cost effective access solution for the Marlborough Sounds
- Confirm the approach for approximately 1,800 faults on the roading network that are outstanding, pending completion of the business case

Identified Problems

1. **Disrupted Access:** The impacts of climate change are increasing the frequency and duration of disrupted access
2. **Lack of Alternatives:** Reliance on roads for access to services and lack of alternatives has led to increased vulnerability to the community during road closures
3. **Asset Vulnerability:** Poor construction standard and unstable geology means the Marlborough Sounds roads have a high maintenance cost and safety risk



3. Engagement summary

Completed

Scope Survey
- 125 responses

Community engagement sessions
- Seven sessions, over five days
- Well over 500 people attended
- Collated community supplied evidence and suggested interventions

Targeted stakeholder engagement
- 21 targeted stakeholders engaged with

Economics Survey
- 919 responses
- Results informed the economic case
- Supported the strategic case

How we used your feedback

- Fed into development of the options
- Provided part of the evidence for the strategic case
- Informed the multi-criteria analysis
- Informed the economic case

IT'S BEEN REALLY USEFUL - THANK YOU

On going/ Still to come

Iwi
- There is ongoing engagement with iwi

Stakeholders
- First workshop held late January
- Workshop on emerging preferred option [TODAY]

Emerging preferred option community drop in sessions
- Nine sessions in late June, across the Sounds
- Online session

Survey on emerging preferred option
- Available from 20 June to 11 July (4 weeks)
- Will provide feedback and refine emerging preferred option

4. Strategic Context

Usually Resident Population (2018)

French Pass	Pelorus	Queen Charlotte	Kenepuru	Port Underwood
459	183	711	462	240
15% 50% 30%	23% 54% 16%	13% 58% 30%	8% 50% 41%	11% 54% 35%

Business

Top 3 industries operating in the Sounds

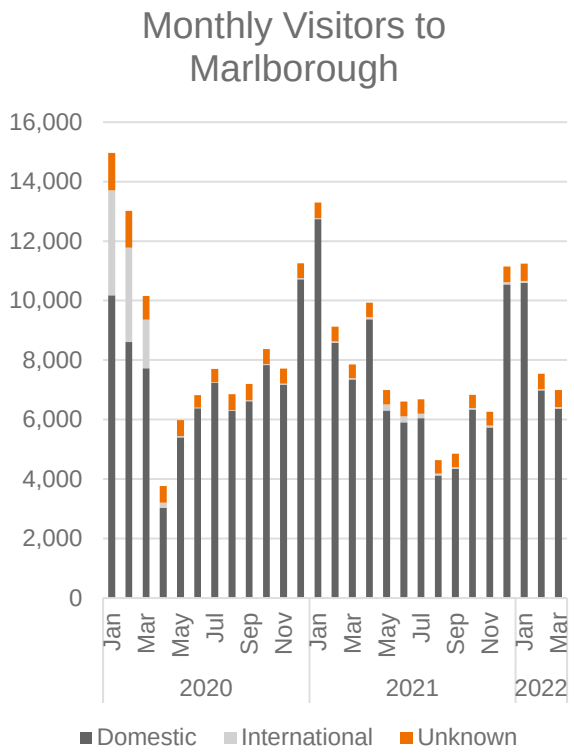
1. Agriculture, Forestry & Fishing: 31%
2. Accommodation and Food Services: 29%
3. Construction: 9%

Median personal income

87%

of national average

Visitor Population



63%

dwellings empty at 2013 census

Existing Transport Options

Zone	Total dwellings	No road access	Percentage no road access
FP	733	100	14%
P	111	56	50%
QC	562	0	0%
K	1,250	570	46%
PU	410	200	49%
Total	**3,066**	**926**	**30%**

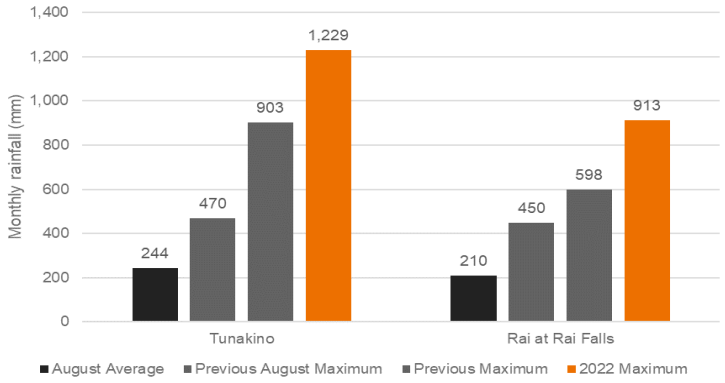
Land
525 km road
- 49% sealed
- 51% unsealed

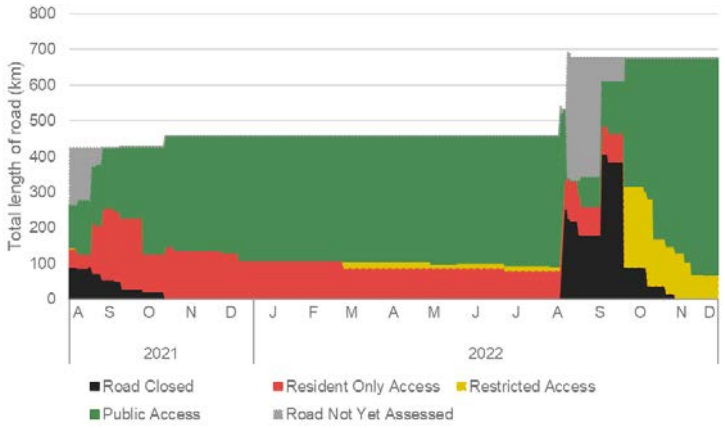
Water
2 ports
6 barge sites
17 boat ramps
32 public jetties

Travel to work	FP	P	QC	K	PU	Sounds	NZ
Work from home	45%	41%	32%	45%	33%	39%	12%
Drove	46%	47%	59%	36%	60%	50%	73%
Active Transport	9%	6%	8%	12%	5%	8%	7%
Other	0%	6%	1%	6%	2%	3%	8%

4. Strategic Context

Problem 1: Disrupted Access





Max duration roads closed

French Pass:	64 days
Pelorus:	28 days
Queen Charlotte:	63 days
Kenepuru:	63 days
Port Underwood:	122 days

Problem 2: Lack of Alternatives

- 2,145 usually resident
- Up to ~4,000 visitors at peak
- At least 150 business

83% of Sounds roads have no alternate route

Loss of access to:

Lifeline infrastructure

Community facilities

30% in mental health following the storms

25% in business confidence

Problem 3: Asset Vulnerability

13% roads highly/very highly susceptible to natural slope instability

73% roads highly/very highly susceptible to slope instability following man-made adaptations

Slips accounted for **63%** of total recorded faults

11 of the 18 most expensive rural roads are in the Sounds

Rural roads in the Sounds spend **10 x more on emergency works** than rest of Marlborough

5. Programme Option Development

Road Segment Approach			Capital Works		
Approach	**Vehicle Restrictions**	**Lane Width**	**Surface Type**	**Stormwater**	**Geotech**
Build back stronger (protect)	No additional restrictions	As existing	As existing	Whole route upgrades	Targeted: existing failures and improvements
Build back stronger (protect)	Additional restrictions	More one lane sections	More unsealed sections	Whole route upgrades	Targeted: existing failures and improvements
Targeted improvements (accommodate)	No additional restrictions	As existing	As existing	Targeted upgrades	Essential: address existing failures
Targeted improvements (accommodate)	Additional restrictions	More one lane sections	More unsealed sections	Targeted upgrades	Essential: address existing failures
Essential repairs (accommodate/ retreat)	Additional restrictions	More one lane sections	More unsealed sections	Essential: address existing failures	Essential: address existing failures
Marine Access (retreat)	Additional restrictions	More one lane sections	More unsealed sections	Essential: address existing failures	None

Marine Infrastructure Indicative Concept		
Emergency Ramp	• Made from well graded gravel • Potentially lined with rock riprap on both sides	• Likely to be 20-30m from shoreline • About 4m wide with sloped sides • Fish Bay ramp as example
Local Hub	• Jetty with floating component • Likely to be 20-30m from shoreline • Concrete launching ramp (~4m wide) • Potentially some localised dredging	• Parking for approx. 6 cars • Bus shelter type structure • Lighting • Approx. 6 moorings • Bulwer Bay as example
Arterial Hub	• Jetty with floating component • Likely to be 20-30m from shoreline • Concrete launching ramp (~4m wide), potentially on reclaimed land • Likely some localised dredging • Parking for > 12 cars • Potentially small marina or > 12 moorings • Tennis court sized area for freight laydown	• Terminal structure, including passenger waiting area, dry storage facility, toilets, etc (around size of community hall) • Lighting • Livestock yard within a certain distance if required • Portage as example
Primary Hub	• Significant marine hub infrastructure like Port of Nelson, Picton and Havelock	

Interventions in every programme:

- Investigate options to minimise impact of tree felling by forestry companies
- Consider planning/consenting changes for earthworks
- Restrict construction in at risk areas (debris flow paths, slope instability, etc)
- Emergency Response Planning for marine facilities post hazard event
- Develop community recovery plans
- Understand extent and scale of risks by undertaking further studies.
- Plan and undertake a robust maintenance programme

6. Emerging Preferred Programme and Hazard Adaptation Plan

- Programme options have been developed consistent with the National Adaptation Plan and PARA framework
- The emerging preferred programme includes a mix of repairs, improved resilience to roads and improvements to water transport as alternatives
- Improved resilience includes targeted strengthening of some areas and improved stormwater
- The programme also trades off customer levels of service in different areas related to road surfacing, lane widths and types of vehicle accommodated into the future
- The adaptation plan provides a much lower level of service for roads but a higher level of service for marine infrastructure
- Funding from government will impact affordability of different options for the Community
- The business case will be sufficient for the WK Board to make a decision on funding repairs as soon as possible following its completion

	Road Focus	Road Access	Balanced	Marine Access	Marine Focus
Rai Valley to Te Aumiti / French Pass		●		▲	
Te Hoiere/Pelorus	●			▲	
Queen Charlotte	●			▲	
Kenepuru			●		▲
Te Whanganui/ Port Underwood		●		▲	

● Emerging preferred ▲ Adaptation plan

6. Adaptation Plan and Future Trigger Events

- Uncertainty when next event will occur, scale of event and extent of damage
- Trigger event may have an impact on the future recovery of an area, or the whole Sounds

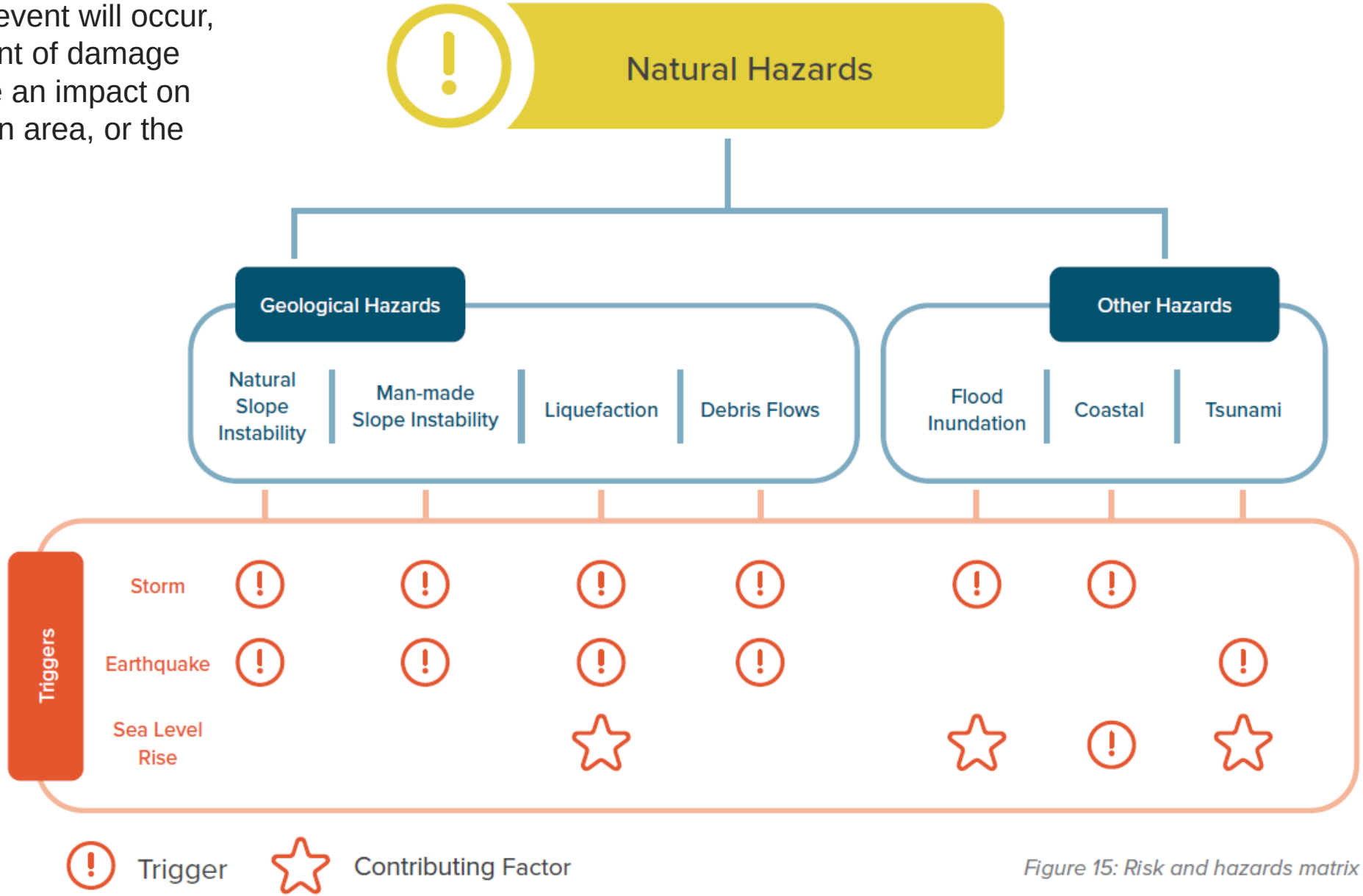
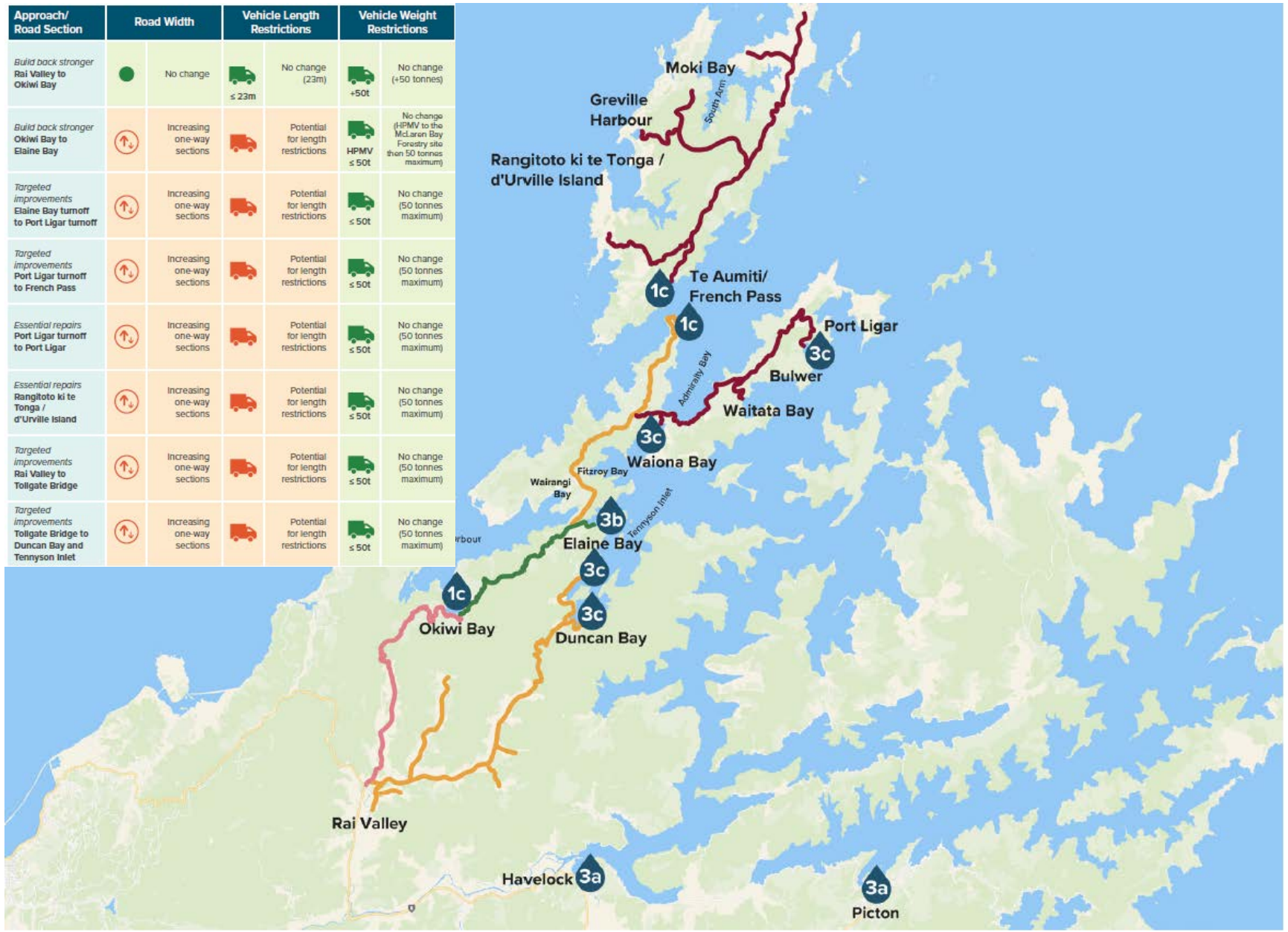


Figure 15: Risk and hazards matrix

6. French Pass Emerging Preferred: Road Access

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Build back stronger **Rai Valley to Okiwi Bay**	●	No change	≤ 23m	No change (23m)	+50t	No change (+50 tonnes)
Build back stronger **Okiwi Bay to Elaine Bay**	↑↓	Increasing one-way sections		Potential for length restrictions	HPMV ≤ 50t	No change (HPMV to the McLaren Bay Forestry site then 50 tonnes maximum)
Targeted improvements **Elaine Bay turnoff to Port Ligar turnoff**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Targeted improvements **Port Ligar turnoff to French Pass**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Essential repairs **Port Ligar turnoff to Port Ligar**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Essential repairs **Rangitoto ki te Tonga / d'Urville Island**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Targeted improvements **Rai Valley to Tollgate Bridge**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Targeted improvements **Tollgate Bridge to Duncan Bay and Tennyson Inlet**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)



Roading Approach Key

Protect
Build back stronger
(No additional restrictions)

Protect
Build back stronger
(Additional restrictions)

Accomodate
Build back with targeted improvements
(No additional restrictions)

Accomodate
Build back with targeted improvements
(Additional restrictions)

Accomodate/retreat
Build back with essential repairs only

Retreat others
Build back roads that provide marine hub access

Marine key

Maintain & protect existing marine hubs

1a Primary Marine Hub · 1b Arterial Marine Hub · 1c Local Marine Hub · 1d Emergency Ramp

Protect & upgrade existing hubs (Passengers only)

2c Local Marine Hub

Protect & upgrade existing hubs (All users)

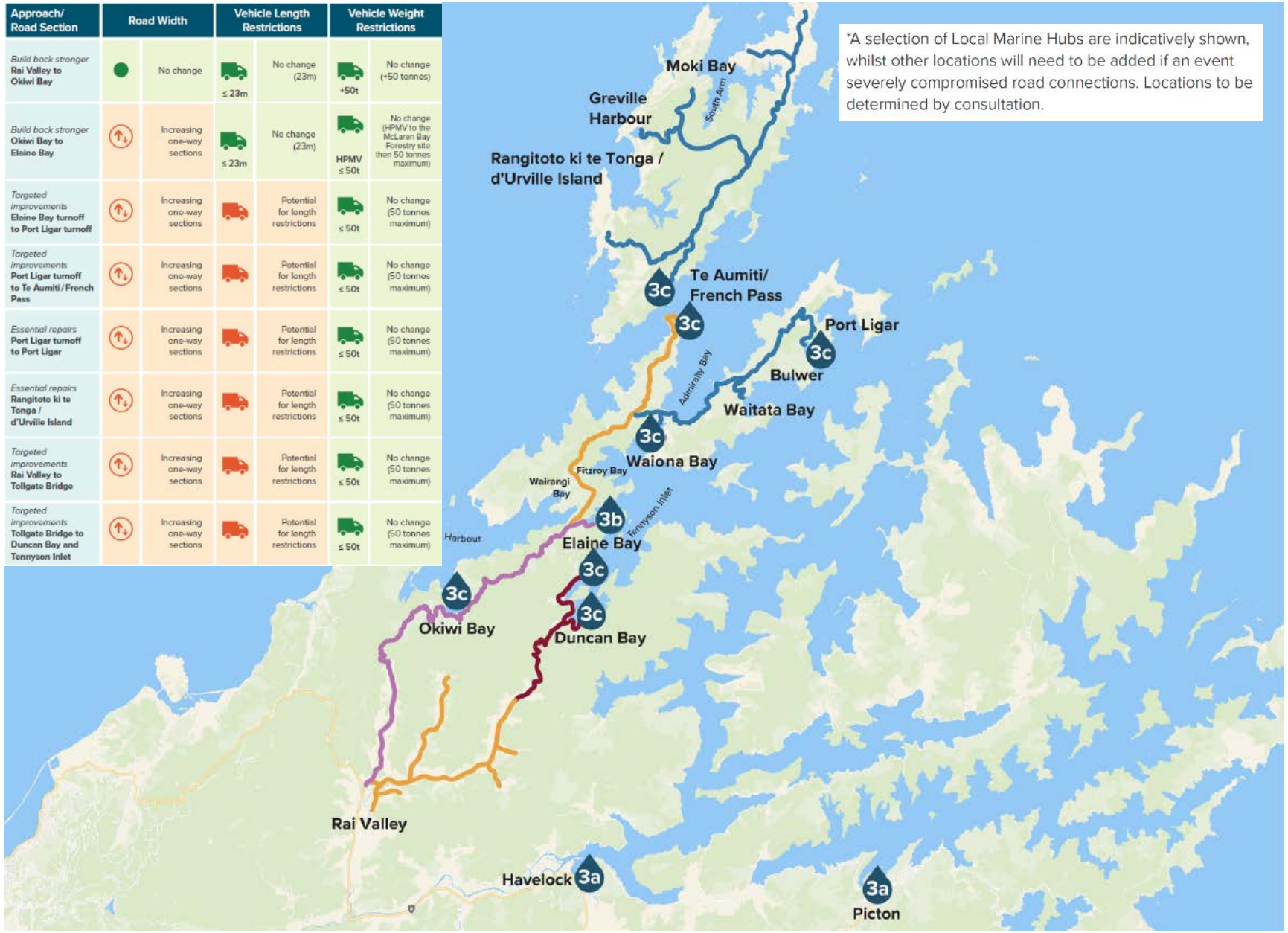
3a Primary Marine Hub · 3b Arterial Marine Hub · 3c Local Marine Hub · 3d Emergency Ramp

New infrastructure or upgrade of level (All users)

4a Primary Marine Hub · 4b Arterial Marine Hub · 4c Local Marine Hub · 4d Emergency Ramp

6. French Pass HAP: Marine Access

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Build back stronger **Rai Valley to Okiwi Bay**	●	No change	≤ 23m	No change (23m)	+50t	No change (+50 tonnes)
Build back stronger **Okiwi Bay to Elaine Bay**	↑↓	Increasing one-way sections	≤ 23m	No change (23m)	HPMV ≤ 50t	No change (HPMV to the McLaren Bay Forestry site then 50 tonnes maximum)
Targeted improvements **Elaine Bay turnoff to Port Ligar turnoff**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Targeted improvements **Port Ligar turnoff to Te Aumiti / French Pass**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Essential repairs **Port Ligar turnoff to Port Ligar**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Essential repairs **Rangitoto ki te Tonga / d'Urville Island**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Targeted improvements **Rai Valley to Tollgate Bridge**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)
Targeted improvements **Tollgate Bridge to Duncan Bay and Tennyson Inlet**	↑↓	Increasing one-way sections		Potential for length restrictions	≤ 50t	No change (50 tonnes maximum)



Roading Approach Key

- **Protect** *Build back stronger (No additional restrictions)*
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- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
- **Retreat others** *Build back roads that provide marine hub access*

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New infrastructure or upgrade of level (All users)

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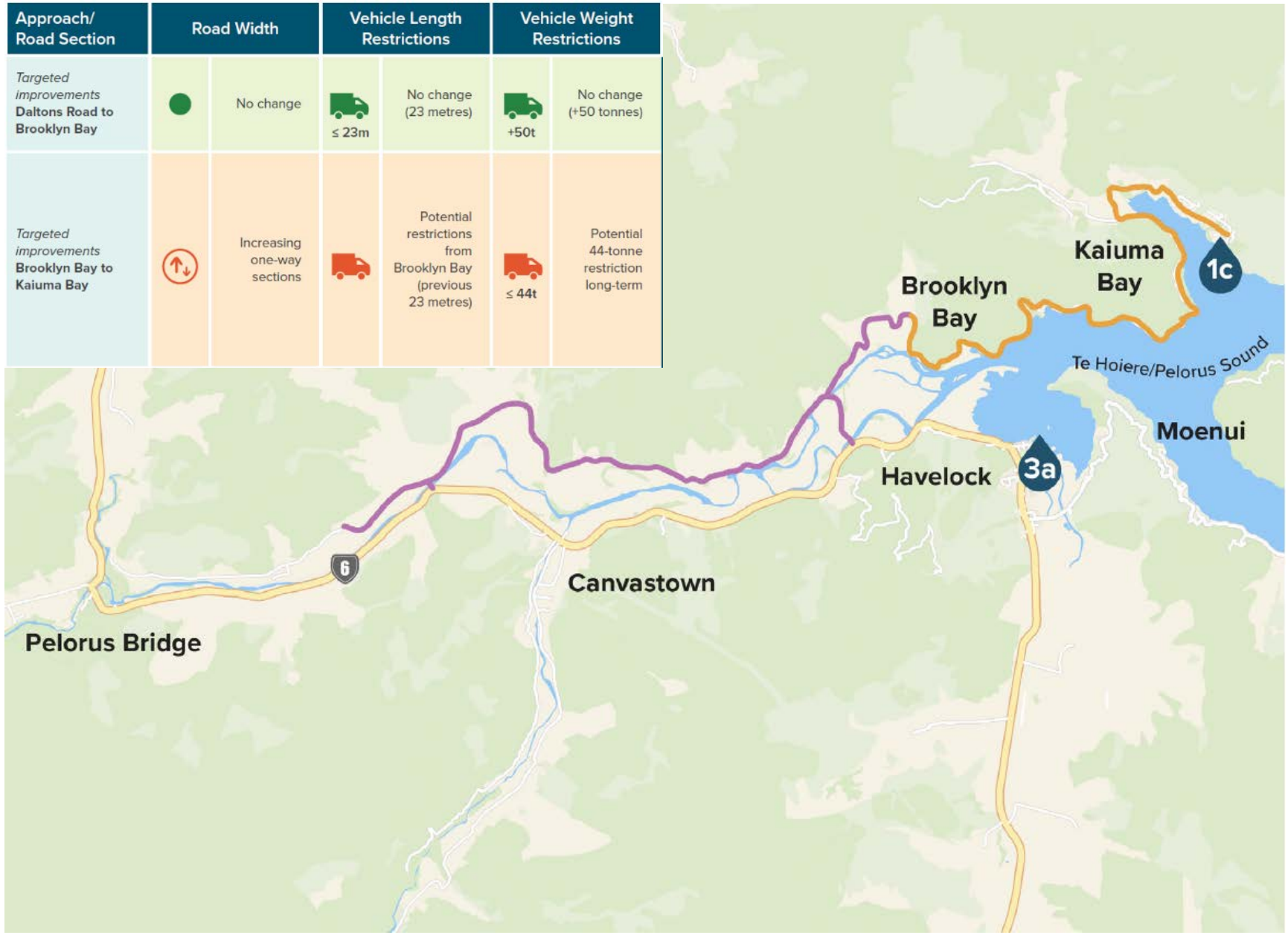
6. Pelorus Emerging Preferred: Road Focus

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted improvements **Daltons Road to Brooklyn Bay**	●	No change	≤ 23m	No change (23 metres)	+50t	No change (+50 tonnes)
Targeted improvements **Brooklyn Bay to Kaiuma Bay**	↑↓	Increasing one-way sections		Potential restrictions from Brooklyn Bay (previous 23 metres)	≤ 44t	Potential 44-tonne restriction long-term



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- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
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- **Retreat others** *Build back roads that provide marine hub access*

Marine key

Maintain & protect existing marine hubs

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Protect & upgrade existing hubs (Passengers only)

2c Local Marine Hub

Protect & upgrade existing hubs (All users)

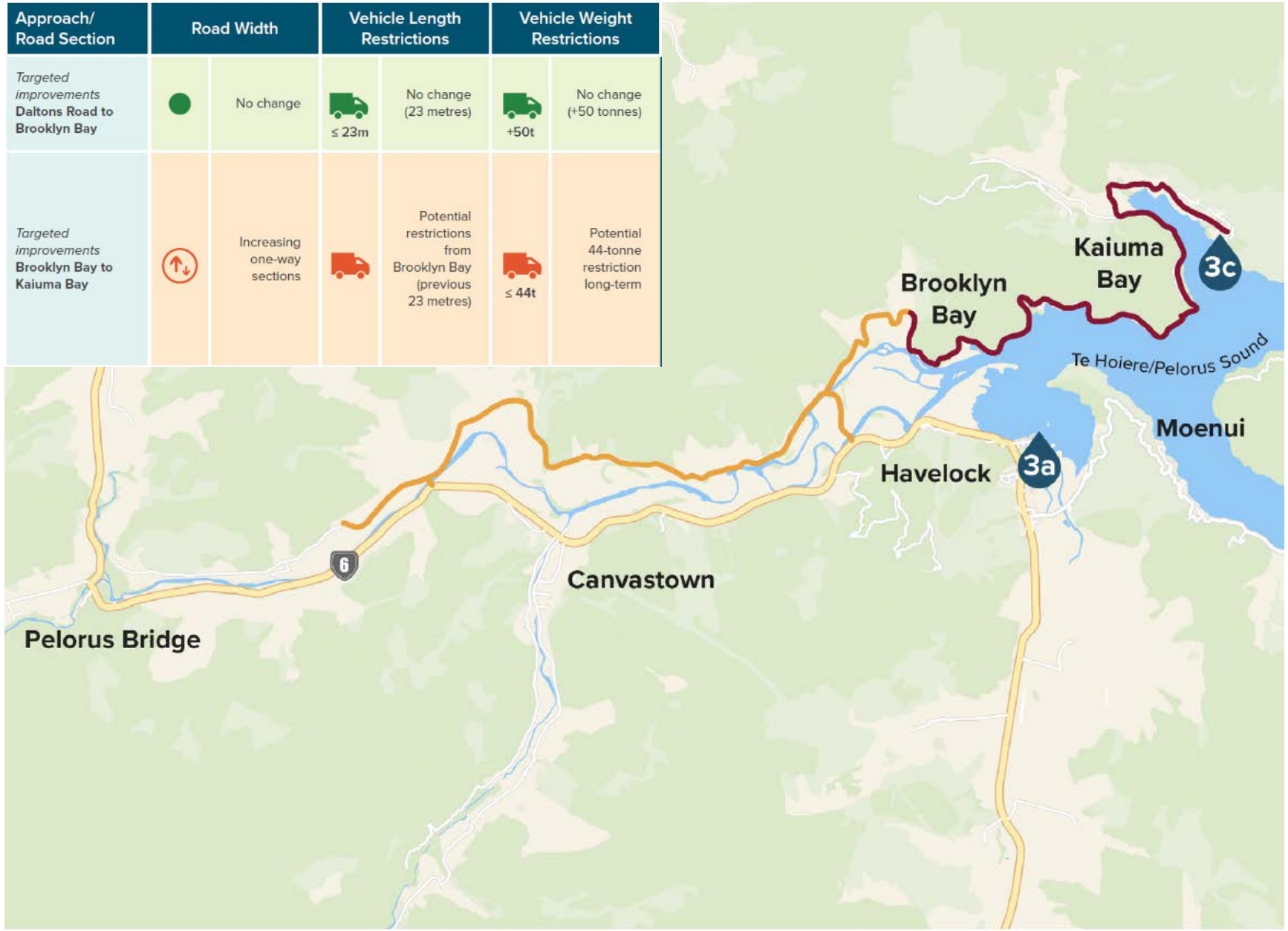
3a Primary Marine Hub · 3b Arterial Marine Hub · 3c Local Marine Hub · 3d Emergency Ramp

New infrastructure or upgrade of level (All users)

4a Primary Marine Hub · 4b Arterial Marine Hub · 4c Local Marine Hub · 4d Emergency Ramp

6. Pelorus HAP: Balanced/ Marine Access

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted improvements **Daltons Road to Brooklyn Bay**	●	No change	≤ 23m	No change (23 metres)	+50t	No change (+50 tonnes)
Targeted improvements **Brooklyn Bay to Kaiuma Bay**	↑↓	Increasing one-way sections		Potential restrictions from Brooklyn Bay (previous 23 metres)	≤ 44t	Potential 44-tonne restriction long-term



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- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
- **Retreat others** *Build back roads that provide marine hub access*

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New infrastructure or upgrade of level (All users)

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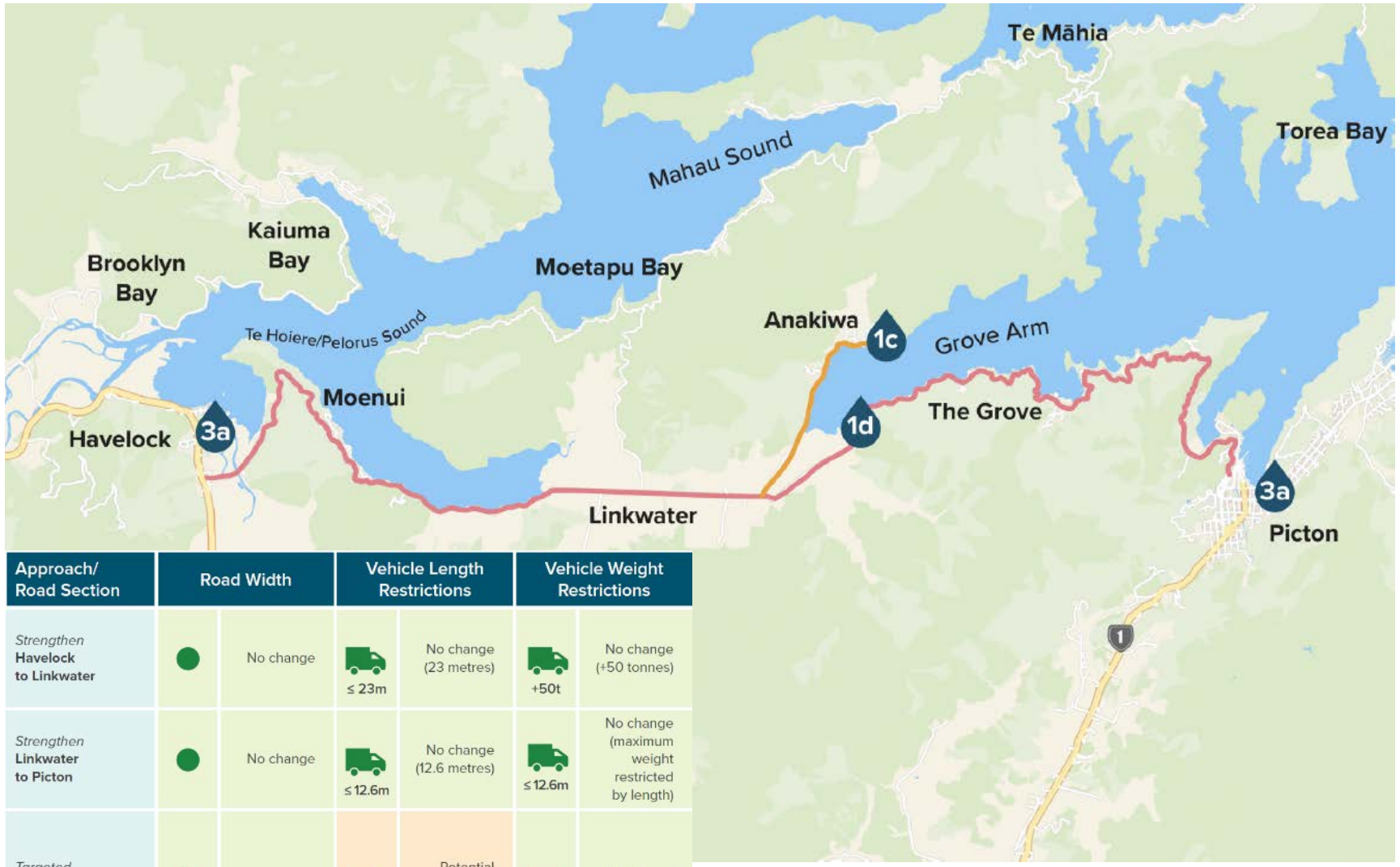
6. Queen Charlotte Emerging Preferred: Road Focus



Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Strengthen **Havelock to Linkwater**	●	No change	≤ 23m	No change (23 metres)	+50t	No change (+50 tonnes)
Strengthen **Linkwater to Picton**	●	No change	≤ 12.6m	No change (12.6 metres)	≤ 12.6m	No change (maximum weight restricted by length)
Targeted improvements **Anakiwa**	●	No change		Potential for length restrictions	+50t	No change (+50 tonnes)

Roading Approach Key

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- **Protect** *Build back stronger (Additional restrictions)*
- **Accomodate** *Build back with targeted improvements (No additional restrictions)*
- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
- **Retreat others** *Build back roads that provide marine hub access*

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New infrastructure or upgrade of level (All users)

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6. Queen Charlotte HAP: Marine Access

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted improvements **Havelock to Linkwater**	●	No change	≤ 23m	No change (23 metres)	+50t	No change (+50 tonnes)
Targeted improvements **Linkwater to Picton**	↑↓	Increasing one-way sections	≤ 12.6m	No change (12.6 metres)	Class 1 (3 axle)	Class 1 with 3 axle limit (could restrict weight to approx. 18 tonnes)
Essential repairs **Anakiwa**	↑↓	Increasing one-way sections		Potential for length restrictions	+50t	No change (+50 tonnes)

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- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
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New infrastructure or upgrade of level (All users)

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6. Kenepuru Emerging Preferred: Balanced

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted improvements **Linkwater to Moetapu turnoff**	↑↓	Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted improvements **Moetapu turnoff to Mahau turnoff**	↑↓	Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes
Targeted improvements **Mahau turnoff to Portage**	↑↓	Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes
Strengthened **Torea to Portage**	●	No change		No change	≤ 50t	No change (50 tonnes max still permitted)
Essential repairs **Portage to Kenepuru Heads**	↑↓	Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted improvements **Kenepuru Heads to Waitaria Bay**	↑↓	Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted improvements **Waitaria Bay to road ends**	↑↓	Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted improvements **Waitaria Bay to Clova Bay**	↑↓	Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted improvements **Kenepuru Heads to Titirangi**	↑↓	Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Essential repairs **Moetapu**	↑↓	Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes

Roading Approach Key

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- **Protect** *Build back stronger (Additional restrictions)*
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- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
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New infrastructure or upgrade of level (All users)

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6. Kenepuru HAP: Marine Focus

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted Improvements **Linkwater to Moetapu turnoff**		Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted Improvements **Moetapu turnoff to Mahau turnoff**		Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes
Targeted Improvements **Mahau turnoff to Portage**		Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes
Strengthened **Torea to Portage**		No change		No change	≤ 50t	No change (50 tonnes max still permitted)
Essential repairs **Portage to Kenepuru Heads**		Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes

Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted Improvements **Kenepuru Heads to Waitaria Bay**		Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted Improvements **Waitaria Bay to road ends**		Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted Improvements **Waitaria Bay to Clova Bay**		Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Targeted Improvements **Kenepuru Heads to Titirangi**		Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes max still permitted)
Essential repairs **Moetapu**		Increasing one-lane sections	≤ 12.6m	Potential for length restrictions to 12.6 metres	< 44t	Potential for less than 44 tonnes

Roading Approach Key

Protect
Build back stronger (No additional restrictions)

Protect
Build back stronger (Additional restrictions)

Accomodate
Build back with targeted improvements (No additional restrictions)

Accomodate
Build back with targeted improvements (Additional restrictions)

Accomodate/retreat
Build back with essential repairs only

Retreat others
Build back roads that provide marine hub access

Marine key

Maintain & protect existing marine hubs

1a Primary Marine Hub · 1b Arterial Marine Hub · 1c Local Marine Hub · 1d Emergency Ramp

Protect & upgrade existing hubs (Passengers only)

2c Local Marine Hub

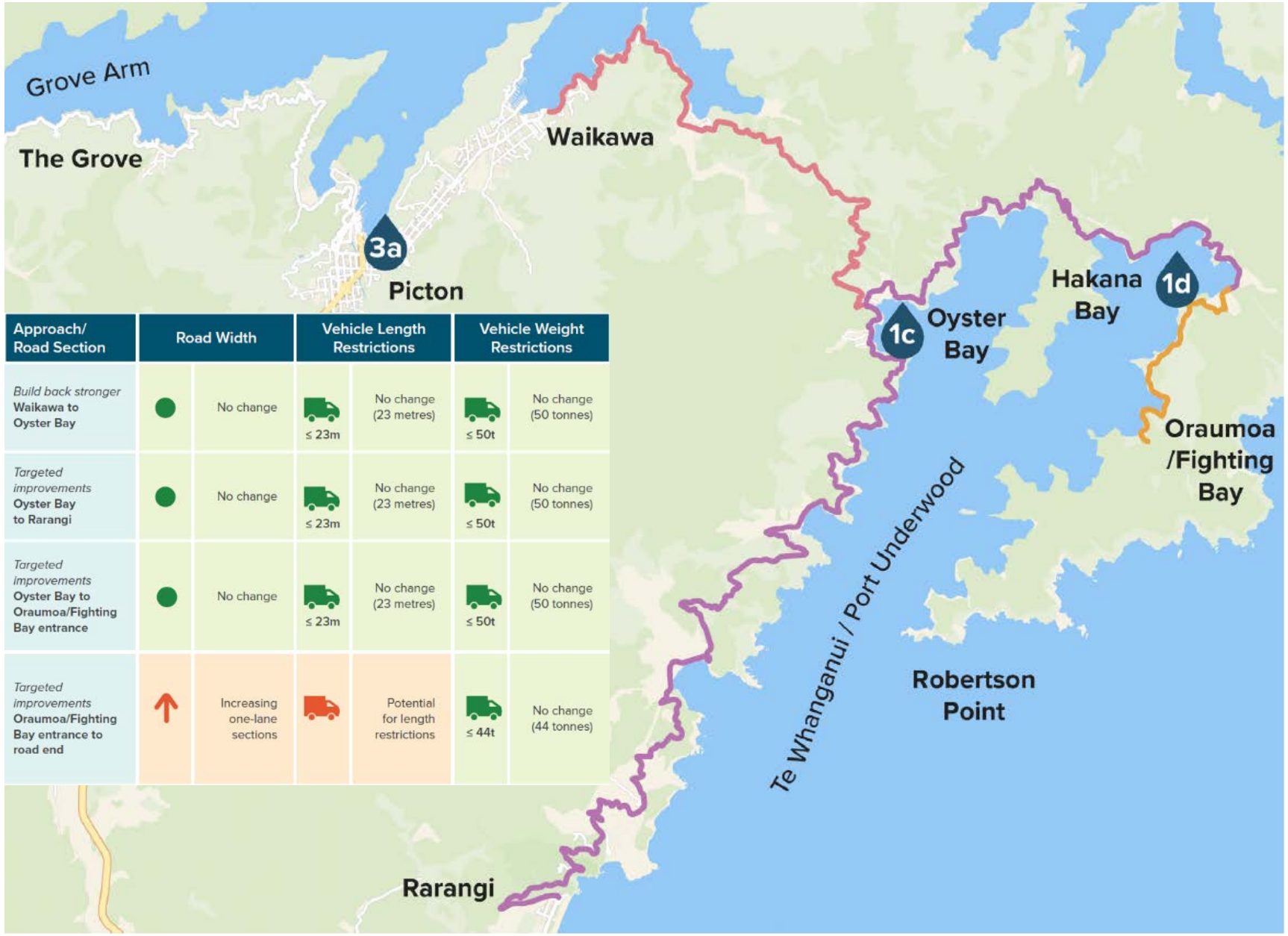
Protect & upgrade existing hubs (All users)

3a Primary Marine Hub · 3b Arterial Marine Hub · 3c Local Marine Hub · 3d Emergency Ramp

New infrastructure or upgrade of level (All users)

4a Primary Marine Hub · 4b Arterial Marine Hub · 4c Local Marine Hub · 4d Emergency Ramp

6. Port Underwood Emerging Preferred: Road Access



Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Build back stronger **Waikawa to Oyster Bay**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Targeted improvements **Oyster Bay to Rarangi**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Targeted improvements **Oyster Bay to Oraumoa/Fighting Bay entrance**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Targeted improvements **Oraumoa/Fighting Bay entrance to road end**	↑	Increasing one-lane sections		Potential for length restrictions	≤ 44t	No change (44 tonnes)

Roading Approach Key

- **Protect** *Build back stronger (No additional restrictions)*
- **Protect** *Build back stronger (Additional restrictions)*
- **Accomodate** *Build back with targeted improvements (No additional restrictions)*
- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
- **Retreat others** *Build back roads that provide marine hub access*

Marine key

Maintain & protect existing marine hubs

1a Primary Marine Hub · 1b Arterial Marine Hub · 1c Local Marine Hub · 1d Emergency Ramp

Protect & upgrade existing hubs (Passengers only)

2c Local Marine Hub

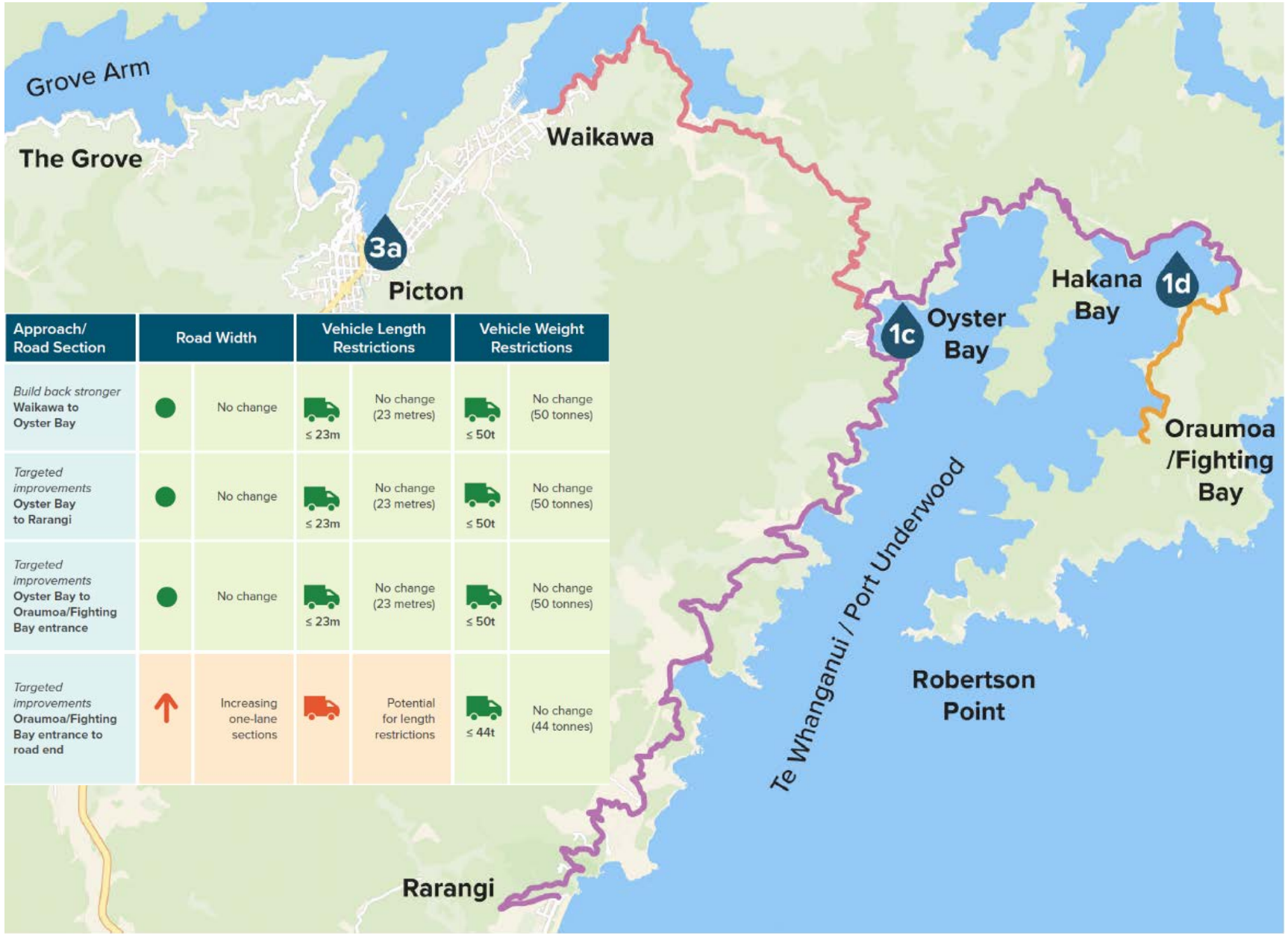
Protect & upgrade existing hubs (All users)

3a Primary Marine Hub · 3b Arterial Marine Hub · 3c Local Marine Hub · 3d Emergency Ramp

New infrastructure or upgrade of level (All users)

4a Primary Marine Hub · 4b Arterial Marine Hub · 4c Local Marine Hub · 4d Emergency Ramp

6. Port Underwood Emerging Preferred: Road Access



Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Build back stronger **Waikawa to Oyster Bay**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Targeted improvements **Oyster Bay to Rarangi**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Targeted improvements **Oyster Bay to Oraumoa/Fighting Bay entrance**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Targeted improvements **Oraumoa/Fighting Bay entrance to road end**	↑	Increasing one-lane sections		Potential for length restrictions	≤ 44t	No change (44 tonnes)

Roading Approach Key

- **Protect** *Build back stronger (No additional restrictions)*
- **Protect** *Build back stronger (Additional restrictions)*
- **Accomodate** *Build back with targeted improvements (No additional restrictions)*
- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
- **Retreat others** *Build back roads that provide marine hub access*

Marine key

Maintain & protect existing marine hubs

1a Primary Marine Hub · 1b Arterial Marine Hub · 1c Local Marine Hub · 1d Emergency Ramp

Protect & upgrade existing hubs (Passengers only)

2c Local Marine Hub

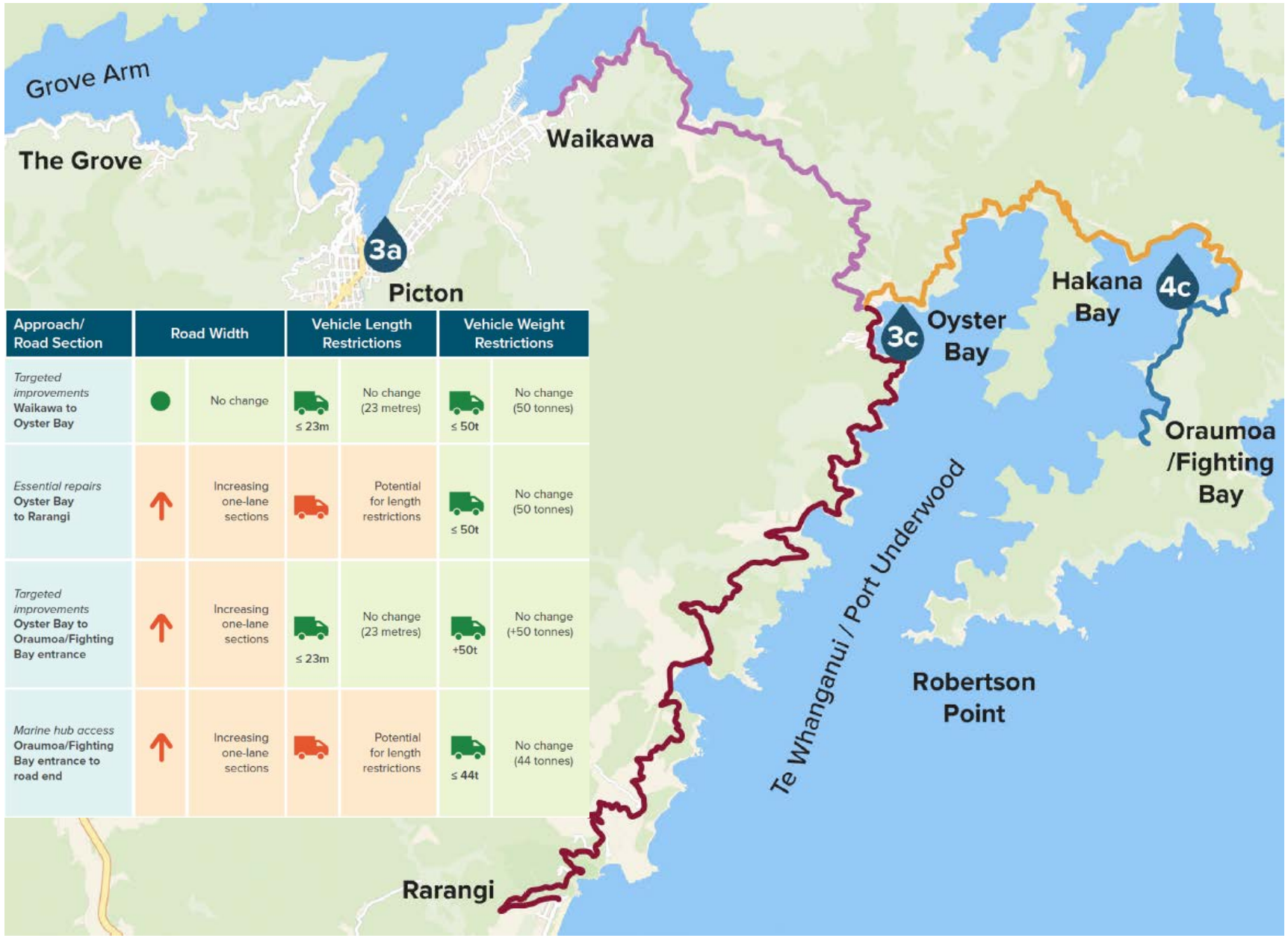
Protect & upgrade existing hubs (All users)

3a Primary Marine Hub · 3b Arterial Marine Hub · 3c Local Marine Hub · 3d Emergency Ramp

New infrastructure or upgrade of level (All users)

4a Primary Marine Hub · 4b Arterial Marine Hub · 4c Local Marine Hub · 4d Emergency Ramp

6. Port Underwood HAP: Marine Access



Approach/ Road Section	Road Width		Vehicle Length Restrictions		Vehicle Weight Restrictions	
Targeted improvements **Waikawa to Oyster Bay**	●	No change	≤ 23m	No change (23 metres)	≤ 50t	No change (50 tonnes)
Essential repairs **Oyster Bay to Rarangi**	↑	Increasing one-lane sections		Potential for length restrictions	≤ 50t	No change (50 tonnes)
Targeted improvements **Oyster Bay to Oraumoa/Fighting Bay entrance**	↑	Increasing one-lane sections	≤ 23m	No change (23 metres)	+50t	No change (+50 tonnes)
Marine hub access **Oraumoa/Fighting Bay entrance to road end**	↑	Increasing one-lane sections		Potential for length restrictions	≤ 44t	No change (44 tonnes)

Roading Approach Key

- **Protect** *Build back stronger (No additional restrictions)*
- **Protect** *Build back stronger (Additional restrictions)*
- **Accomodate** *Build back with targeted improvements (No additional restrictions)*
- **Accomodate** *Build back with targeted improvements (Additional restrictions)*
- **Accomodate/retreat** *Build back with essential repairs only*
- **Retreat others** *Build back roads that provide marine hub access*

Marine key

Maintain & protect existing marine hubs

1a Primary Marine Hub · 1b Arterial Marine Hub · 1c Local Marine Hub · 1d Emergency Ramp

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New infrastructure or upgrade of level (All users)

4a Primary Marine Hub · 4b Arterial Marine Hub · 4c Local Marine Hub · 4d Emergency Ramp

7. Strategic alignment

Document	Alignment
National Adaptation Plan	**VERY STRONG:** Seeking to address identified climate adaptation issues.
Tiro Rangi: Waka Kotahi Adaptation Plan 2022-24	**VERY STRONG:** Contributes to the overall goal of Tiro Rangi by adapting access to the Sounds so that it is resilient to climate change.
GPS on Land Transport 2021	**STRONG:** Strongest with climate change. There is also alignment with freight connections and safety.
Arataki: Waka Kotahi's 30-year plan	**STRONG:** Alignment is strongest with resilience and security as it aims to enhance the community's long-term resilience to the impacts of climate change
Draft RLTP 2021-2031	**STRONG:** Well aligned with strategic objectives
Marlborough Roading AMP (2018-21)	**STRONG:** Aligns with achieving the appropriate customer levels of service.
Marlborough Long Term Plan	**STRONG**: Directly aligned with the biggest challenge noted for the transport network in the LTP.
Marlborough Climate Change Action Plan 2020	**STRONG**: Directly aligned with Goal 2 and will contribute to achieving the other three goals.

8. MCA Evaluation

Key MCA Evaluation Comments

Providing travel alternatives: Marine programmes provide alternatives if the road is closed, so are scored more highly
Reduce disrupted access: Marine options considered as a useful back up, but more unreliable compared to the road network
Improve resilience: Scores vary by zone based on underlying hazards

Technical Difficulty: Scope and scale of work considered. Areas or programmes with more unusual or not typical work scored more poorly

Social and Community Impacts: Marine options score less poorly for the community compared to business
Environmental Impacts: Scoring dependent on the receiving environment, susceptibility to certain hazard failure modes and hazard failure mechanisms. Programmes that result in more long-term benefits to the environment score more positively.
Climate Change Mitigation: Programmes with little construction, and maintenance of mostly gravel roads will have lower emissions and score better. Programmes where trips are supressed due to poor access, or diverted to marine modes have slight benefits for mitigation.
Supplier Capacity and Capability: Marine focused programmes scored more negatively due to the difficultly/ lead times involved with new infrastructure

Area	Sensitivity test conclusions
French Pass	**Balanced** preferred in baseline, but other tests see Marine Access or Road Focus preferred
Pelorus	**Road Focus** preferred in all tests
Queen Charlotte	**Road Focus/ Road Access** preferred in all tests (these programmes are identical)
Kenepuru	**Balanced** preferred in baseline and equal weightings, but other tests see other programmes
Port Underwood	**Road Focus** preferred in all tests

Area	Road Focus	Road Access	Balanced	Marine Access	Marine Focus	Current Status
Rai Valley to Te Aumiti / French Pass	$75M	$45M	$30M	$20M	$20M	$4M
Te Hoiere/Pelorus	$5M	$4M	$2M	$2M	$2M	$1M
Queen Charlotte	$30M	$30M	$15M	$10M	$10M	$2M
Kenepuru	$150M	$80M	$60M	$50M	$40M	$10M
Te Whanganui/Port Underwood	$40M	$20M	$15M	$10M	$7M	$3M
Total average (rounded)	**$300M**	**$180M**	**$120M**	**$90M**	**$80M**	**$20M**

Figure 17: The estimated cost for each option.

8. MCA Evaluation

Theme		Investment Objectives			Achievability	Opportunities and Impacts						Weighted score	Rank
		40%			30%	30%							
Criteria Number		1	2	3	4	5			6	7	8		
Criteria		Improve ...resilience by providing travel alternatives	Reduce frequency and duration of disrupted access	Improve resilience of the transport assets	Technical Difficulty	Social and Community Impacts			Environment Effects	Climate Change Mitigation	Supplier capacity and capability		
						Final	Community Focus	Business Focus					
		20%	30%	50%	100%	45%	0%	0%	30%	15%	10%		
Total Weighting		8.0%	12.0%	20.0%	30.0%	13.5%	0.0%	0.0%	9.0%	4.5%	3.0%		
Port Underwood	Do Minimum	0	-2	-1	3	-2	-2	-2	-2	-1	3	0.055	5
	Road Focus	0	2	2	1	2	2	2	1	-2	2	1.270	1
	Road Access	0	1	1	2	1	1	1	1	-2	2	1.115	2
	Balanced	1	0	0	2	1	1	0	2	-1	2	1.010	3
	Marine Access	2	-1	-1	2	-1	1	-1	-2	-1	2	0.140	4
	Marine Focus	2	-2	-2	2	-1	1	-1	-1	-1	2	-0.090	6
Pelorus	Do Minimum	1	-1	-1	3	-1	-1	-1	-2	0	3	0.435	5
	Road Focus	1	2	2	0	2	2	2	1	-1	2	1.095	1
	Road Access	1	1	1	1	1	1	1	1	-1	2	0.940	2
	Balanced	2	1	0	0	1	1	1	1	-1	2	0.520	3
	Marine Access	2	1	0	0	1	1	1	1	-1	2	0.520	3
	Marine Focus	2	-1	-1	1	-1	-1	-3	-1	0	2	-0.025	6
Queen Charlotte	Do Minimum	1	-2	-2	3	-3	-3	-3	-2	0	3	-0.155	4
	Road Focus	1	1	2	-2	3	3	3	1	-3	1	0.390	1
	Road Access	1	1	2	-2	3	3	3	1	-3	1	0.390	1
	Balanced	1	-1	1	-1	2	2	2	1	-2	1	0.160	3
	Marine Access	2	-2	0	-1	1	1	1	1	-2	0	-0.245	5
	Marine Focus	2	-3	-1	-2	1	1	1	0	-1	-1	-0.940	6
French Pass	Do Minimum	-1	-2	-2	3	-3	-3	-3	-2	-1	3	-0.360	6
	Road Focus	0	2	1	-1	2	2	2	1	-3	1	0.395	4
	Road Access	1	0	1	1	1	1	1	1	-3	1	0.700	3
	Balanced	2	-1	2	1	1	1	1	1	-2	0	0.875	1
	Marine Access	2	-2	3	1	0	0	-1	1	-1	0	0.865	2
	Marine Focus	3	-2	2	-1	-2	-2	-2	1	-1	-1	-0.155	5
Kenepuru	Do Minimum	1	-3	-3	3	-3	-3	-3	-2	-1	3	-0.520	4
	Road Focus	1	0	-2	-3	2	2	-3	1	-3	-2	-1.055	6
	Road Access	2	-1	-1	-2	1	2	-3	1	-2	-1	-0.655	5
	Balanced	2	2	0	-1	0	1	-2	1	-2	-1	0.070	1
	Marine Access	3	1	1	-2	-2	-1	-2	2	-1	-2	-0.235	2
	Marine Focus	3	0	3	-3	-2	-2	-2	1	-1	-3	-0.375	3

9. Economic Evaluation

- Our assessment includes a transport economic efficiency assessment, aligned to Waka Kotahi guidance
- In addition, we assess the wider economic benefit considering the detrimental effect recent storm events have had on the Sounds and its communities
- Note that the productivity loss triggered by interrupted transport access in the Marlborough region cannot readily be transferred elsewhere, resulting in a reduction in the regional GDP and in the national GDP.

Area	Road Focus	Road Access	Balanced	Marine Access	Marine Focus	Current Status
Rai Valley to Te Aumiti / French Pass	Almost Certain	Almost Certain	Likely	Likely	Possible	Unlikely
Te Hoiere/Pelorus	Almost Certain	Almost Certain	Almost Certain	Almost Certain	Likely	Unlikely
Queen Charlotte	Almost Certain	Almost Certain	Likely	Possible	Possible	Unlikely
Kenepuru	Almost Certain	Likely	Likely	Possible	Possible	Unlikely
Te Whanganui/Port Underwood	Almost Certain	Likely	Likely	Likely	Possible	Unlikely
Total average	**Almost Certain**	**Almost Certain**	**Likely**	**Possible**	**Possible**	**Unlikely**

Figure 18: Ability to support previous level of economic activity.

10. Workshop Exercise

- Check name badge for your number
- Sit at table for your number
- Chatham House Rules
- Work together over 40 minutes to:
  - Nominate your spokesperson
  - Review material provided – see poster boards and information on table
  - Develop your group's preferred option for the whole Sounds area
    - Provide reasons explaining why this is your preferred option and that it is achievable
    - Highlight what you believe is essential and what is nice to have
  - Note your preferred option on one page of the flipchart
  - Note your reasons on a separate page(s)
  - Also note any other matters that your group think are important
- Note: Please ask questions of the project team as needed
- 3–5-minute report back per group, including any key points of discussion for your group

11. Hazard Adaptation Pathways Q&A

12. Next Steps

- Notes from this workshop will be included in Consultation Summary
- Community engagement – getting involved
  - Provide your feedback via the survey (link)
  - Talk to your communities and encourage participation
  - Come to a community drop-in session
- Finalisation of business case – August 2023
- Council and Waka Kotahi support of business case – by end 2023
- Council consult through LTP – early 2024
- Council and Waka Kotahi funding decision – mid 2024
- Planning – commence mid 2024
- Implementation – commence 2025


Anakiwa Road