



APPENDICES MINUTES

**Paekākāriki Community Board
Meeting**

Tuesday, 30 April 2024

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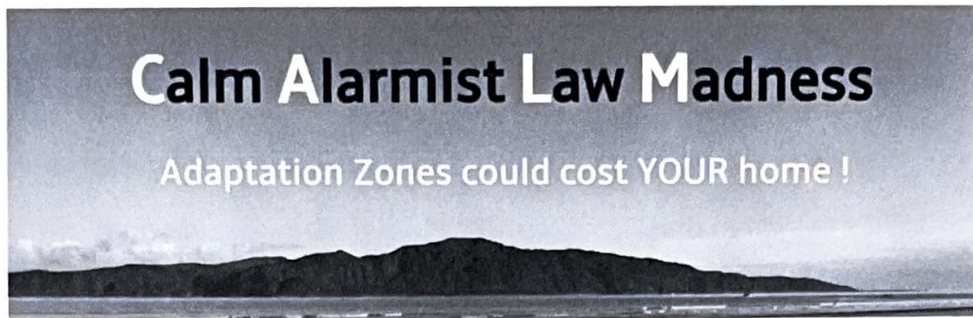
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PAEKĀKĀRIKI COMMUNITY BOARD MEETING/CAP UPDATE
30TH APRIL 2024

Dear Chair, Councillor, and Board Members.

Thank you for the opportunity to speak on behalf of CALM, a local advocacy group made up of Kapiti residents and business owners.

For some time now, we have had genuine concerns about the Coastal Adaptation Area process led by the Coastal Advisory Panel.

As we will all be aware at this late stage in the proceedings, the process is fraught with so many holes it has become a farce and can no longer be taken seriously.

The climate science is not based on reality, and the 'community engagement' portion is nowhere near genuine consultation with the residents of Kapiti. The same residents who will bear the harsh consequences of decisions made by apparently misinformed individuals ironically elected by us.

The consultation process recently carried out by Council cannot even be considered a serious attempt at engaging with the community. Numerous residents provided feedback to CALM that they didn't even receive their letter from Council until the popups were all but over. There was no opportunity for working ratepayers to show up as they were held during business hours. At least one of the venues was inappropriate - a noisy swimming pool foyer. And the feedback process was so complicated that even seasoned accountants and economists struggled to understand the information presented to them. The average person with little or no background knowledge on the Takutai Kapiti process would have been at a loss to understand what was going on.

We do however appreciate the efforts of the CAP members who took the time to attend these popups and community Board meetings such as this, who provided honest answers about their own process. Despite the Council's opposition, Don, Kelvin and Martin have consistently fronted up when it would have been far easier to take the route which was strongly advocated by Council staff. For that we thank them on their stance. We do, however, wonder if having members of the Technical Advisory Group present may have been a good idea.

Despite all the rhetoric of the risk of climate change no one seems to be asking how our ratepayers can afford to pay for the hypothetical pathways CAP and Jacobs are tabling in their recent economic analysis for KCDC consideration in June.

The figures are in excess of \$1B (which is a cost of approximately \$40,000 per ratepayer).

The critical point is that if KCDC adopt CAP's recommendations, they will be making Kapiti uneconomical to live in and will instigate the demise of our valued tūrangawaewae. Residents struggling with mortgages and rent, and the cost-of-living crisis in general, now face astronomical insurance premiums and the very real potential for insurance being cancelled. This is unfortunately already happening and is harming people.

The Council and CAP are working against the best interests of the whole community on the pretext of protecting it from climate change. This degree of climate alarm is not supported by scientific evidence internationally. Climate catastrophism is clearly progressive politics, shamelessly dressed up as science. The science continues to be nowhere near settled.

The irony is that if CAP used the recommended international sea rise factor of SSP/RCP 4.5 instead of the extreme 8.5 there would be no hazard or cost to our community and we could have saved \$4M on this process and avoided the insurance train crash that is heading our way.

We don't build roads, bridges and homes to protect ourselves from 1% probability of risk do we?

The Council is also damaging its own community using ratepayer funds to do so - an excess of \$4m to consultants, scientists and bureaucrats so far and counting, including generating ridiculously voluminous reports to justify their income. It has the appearance of a typical gravy train.

The solution to this fiasco clearly looks like a whole new council and mayor need to be elected in 2025 because what we have now is an undemocratic conglomerate chosen from the ill-advised and largely misinformed to do the unnecessary. We are all aware that the directives come from central government - the Ministry for the Environment - but what if the Kapiti Coast District Council was prepared to take a stand against this for the citizens in their jurisdiction? People just trying to live their lives in peace. The Councillors need to remember when they vote that their only legal requirement is the NZ Coastal Statement Policy, not the Ministry for the Environment guidelines which suggest the RCP8.5 scenario. Guidelines are just that and have no statutory basis.

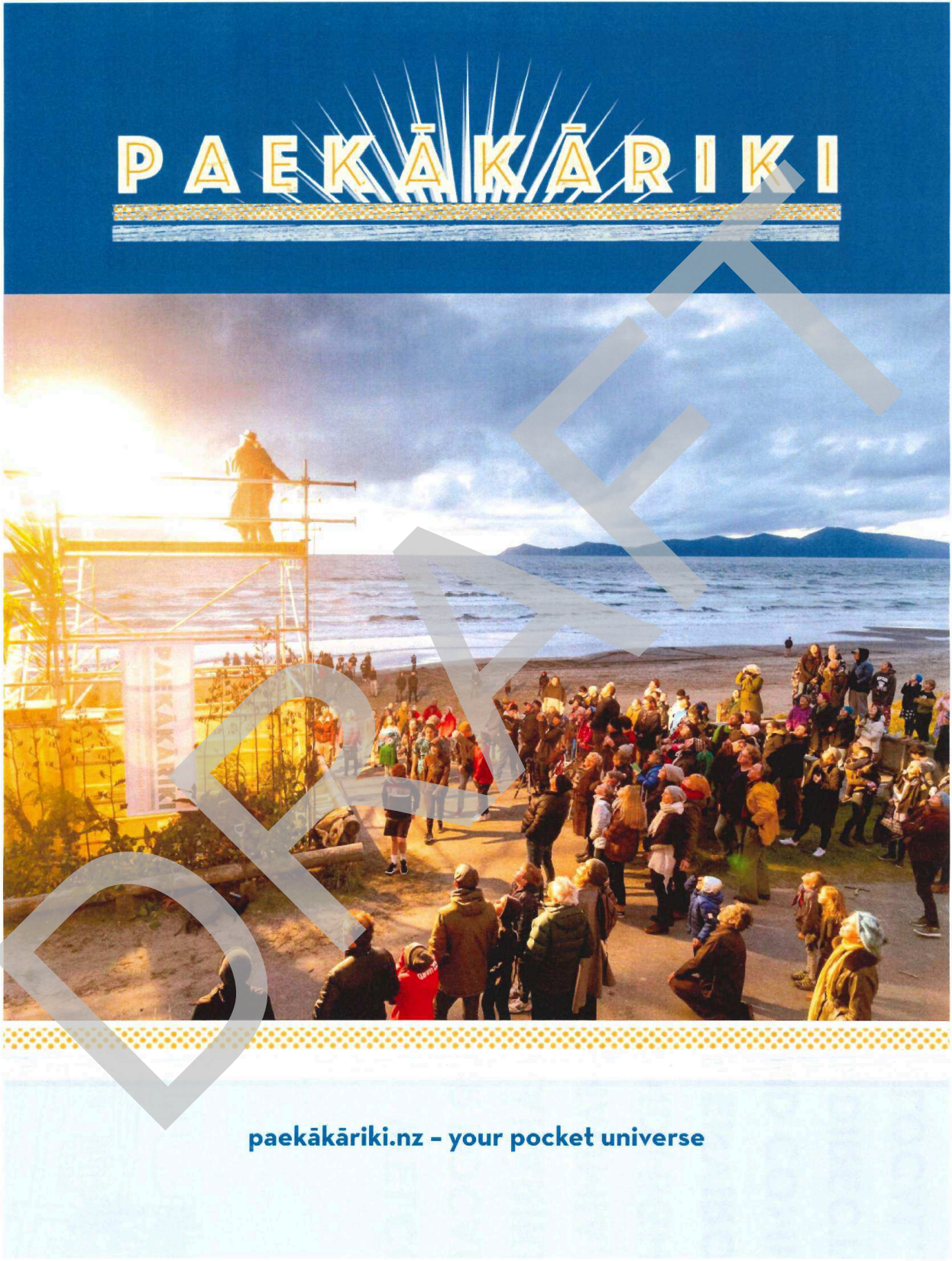
I would like to close by asking this question to each of the Board members and Council staff present tonight. Is the part you're playing acting as a catalyst for inflicting an unprecedented level of chaos on our beautiful Coast and its inhabitants? **Or are you working for the greater good of our community?**

Thank you for your time.

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Paekakariki Community Board Update

30 April 2024

Darren Utting CPBHEB JV

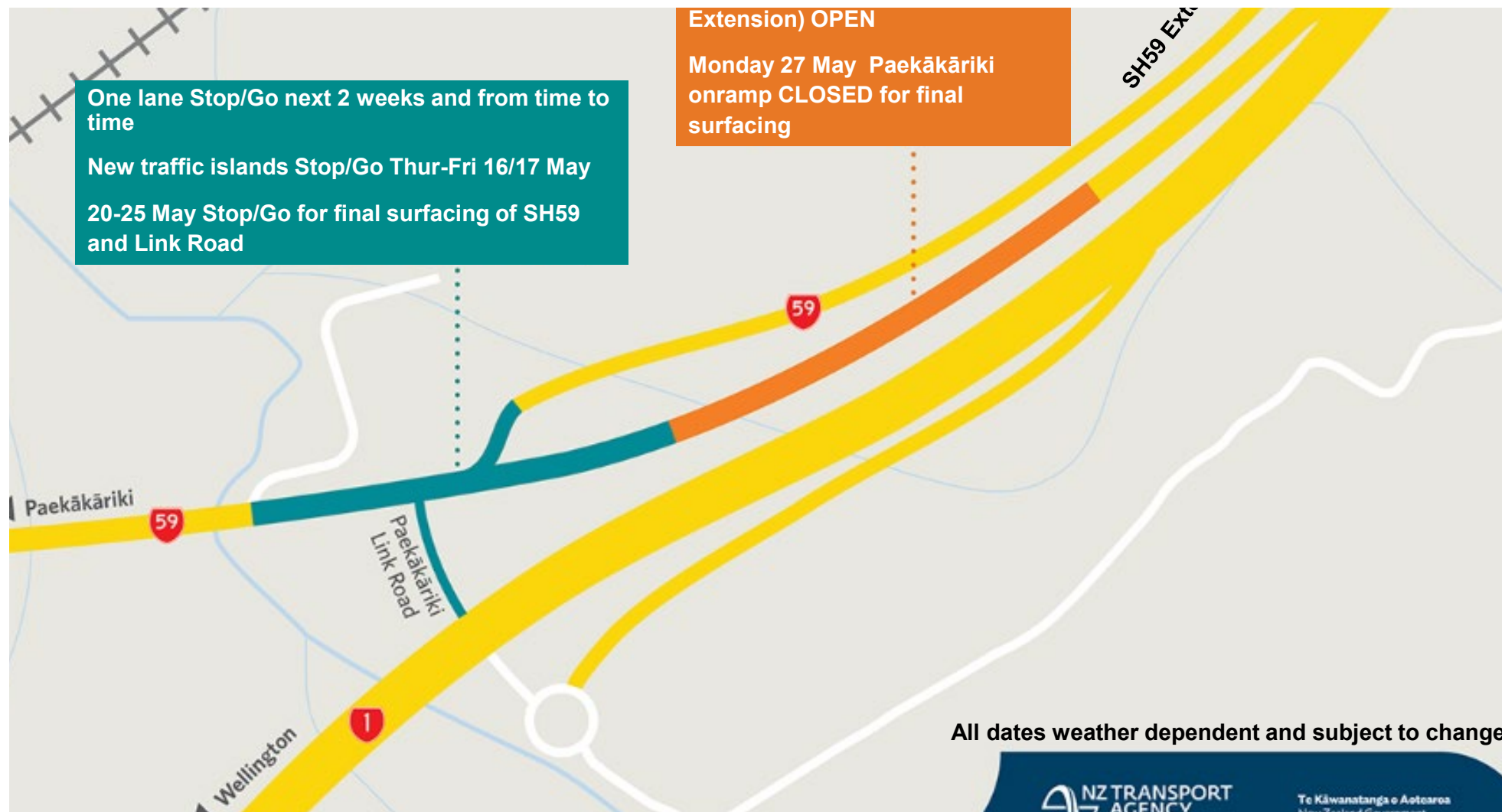
Roadworks update – to finish 31 May

All dates weather dependent and subject to change

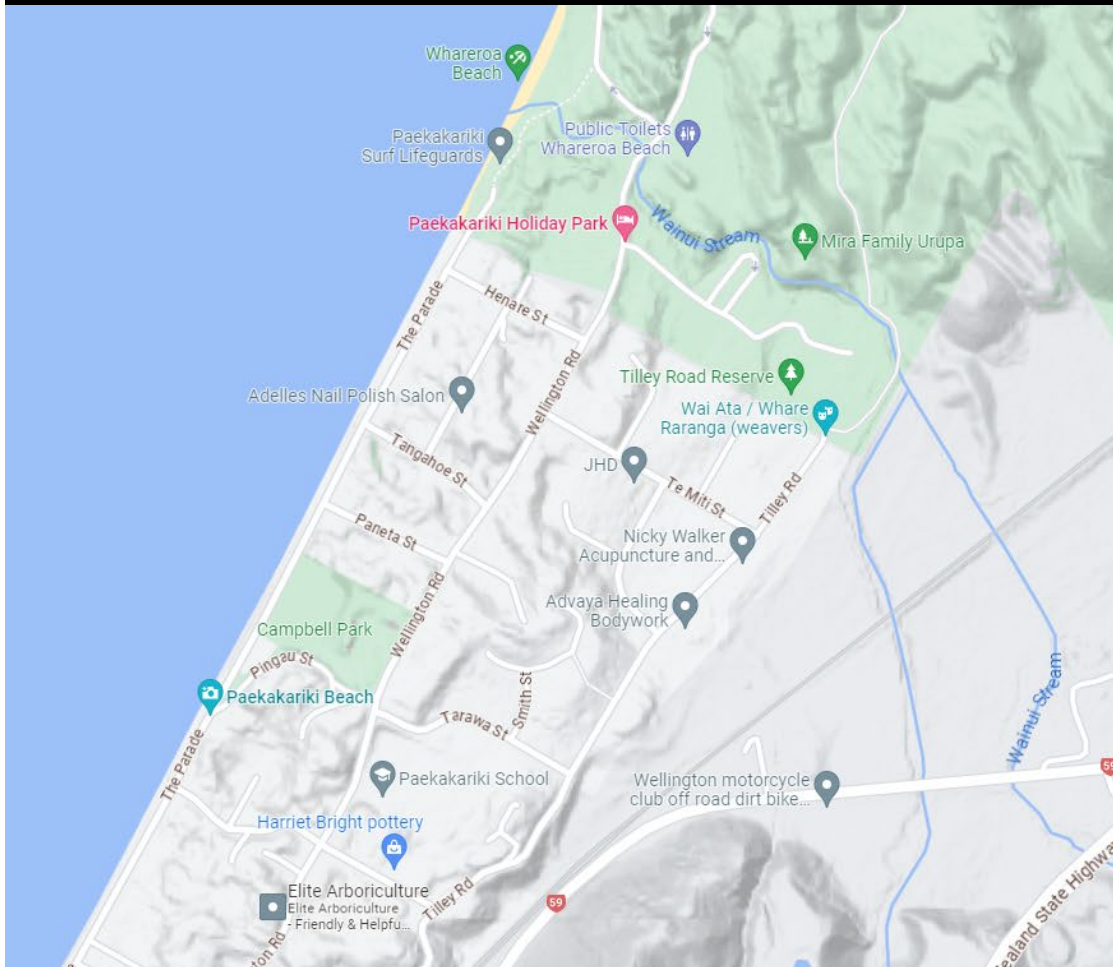
- Day stop/go at Bridge 2 this week and next week
- Whareroa offramp day closure 13 May (14 May contingency) divert to Paekākāriki offramp (Br 2 = 2 lanes)
- Whareroa onramp day closure Wed 15 May, OPEN Coast Rd southbound as detour (don't advertise pls!)
- Br 2 islands Stop/Go Thur-Fri 16/17 May
- W/c 20 May final SMA surfacing of SH59 and Br2 - stop/go
- 25 May Coast Rd (SH59 Extension) OPEN
- Monday 27 May (Tue contingency) Paekākāriki onramp CLOSE for SMA surfacing
- Wed 29 May (Thurs contingency) Mackays NB offramp CLOSE (day) divert via SH59 extension
- Thur/Fri 30/31 Thermoplastic linemarking rolling blocks

Current planned works | NZ Transport Agency Waka Kotahi (nzta.govt.nz)





Wainui / Te Puka Restoration



Freedom Camping Policy 2012 review process

Paekākāriki Community Board
30 April 2024

Freedom camping (also known as responsible camping and sustainable camping) involves using a tent or motor vehicle to camp within 200 metres of a formed road or the beach.

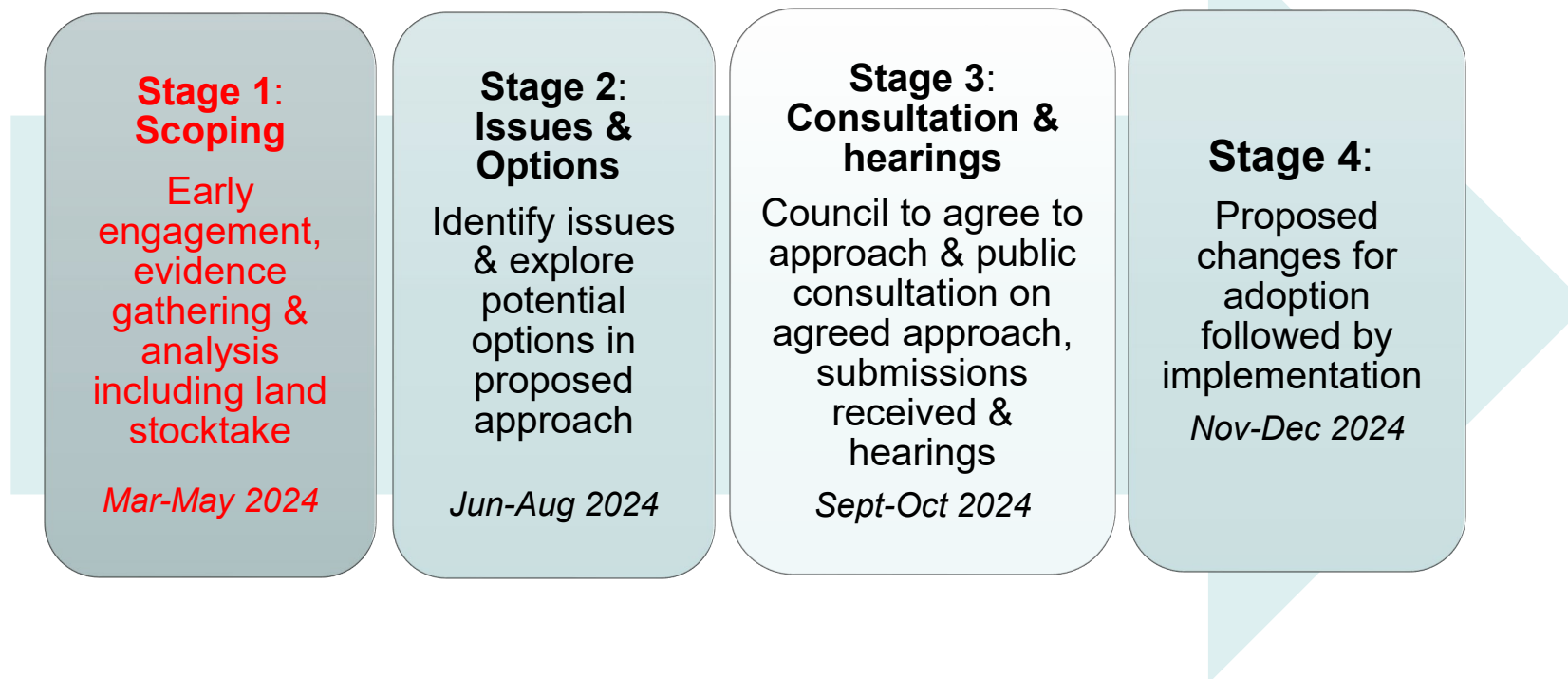


Need for Review

- Changes in legislation in 2023 around self-contained vehicles.
- Increasing levels of activity in our District resulting in pressures.
- Issues and opportunities to address.
- The opportunity for a Bylaw – to better manage infringement and enforcement



Review process - timeframes



**Takutai Kāpiti Coastal Advisory Panel
Update to
Paekakariki Community Board
On
Paekakariki Adaptation Area**

(30 April 2024)

Takutai Kāpiti Coastal Advisory Panel



- What's new since last update
- Next Steps
- Questions

Update on the CAP work on the Paekakariki Coastline

Prepared from DRAFT documentation for the CAP's meeting
on 9 February 2024
by Members of the KCDC Coastal Advisory Panel.

The CAP's Decision-Making Process

For each adaptation area –

Define Objectives

Undertake a risk assessment

Determine options and actions

Develop Pathways

Add MCDA weighting & analysis

Add Economic Analysis

Add Signals, Triggers & Thresholds

Finalise Pathways



Finalise Pathways



MCDA Weighting & Analysis

#	Criteria	Weighting	X	Score
1	Ecology	3		1. Highly Undesirable 2. Undesirable 3. Neutral 4. Desirable 5. Highly Desirable
2	Landscape	2		
3	Te ao Maori Values	3		
4	Community, Social & Economic Wellbeing	3		
5	Public Access & Recreation	3		
6	Consenting & Risk	1		
7	Coastal Erosion	3		
8	Coastal Inundation	3		

Economic Analysis

Top three pathways included in the economic analysis



Economic Analysis - Methodology

Inputs:

- Top three pathways for each management unit (from MCDA scoring)
- Further definition and mapping of adaptation pathway options/actions
- Calculation of costs and losses for a baseline pathway (e.g. no additional interventions from current practice)
- Costing of options at each timeframe (implementation costs and ongoing maintenance/operational costs)
- Calculation of residual losses for each pathway (property and selected Council infrastructure only)

Economic Analysis



Outputs:

A series of economic metrics for each pathway:

- Pathway Cost
- Cost + Loss
- Value for Money
- Damage Avoided
- Cost Benefit ratio
- Number of properties still exposed in 2130

Management Unit 11A – Paekakariki Seawall Erosion

Pathway	Short term	→	Medium term	→	Long term	MCDA ¹ Score	MCDA Ranking	Pathway total PV cost (\$m)	Cost + Loss ² (\$m)	Cost + Loss Ranking	VFM ³ (\$ '000/point)	VFM Ranking	Damages avoided ⁴ (\$m)	Damages avoided ranking	Number properly still exposed 2131
W-0	Baseline							8.4	53.0						15
W-1	Status Quo & Enhance	→	Seawall	→	Re-establish the line with protection structure	63	1	200.1	206.4	1	3276	1	38.3	2	30
W-4	Status Quo & Enhance	→	Re-establish the line with protection structure & Dune reconstruction	→	Beach renourishment	58	3	269.9	275.3	3	4746	3	39.2	1	1
W-3	Status Quo & Enhance	→	Re-establish the line with protection structure	→	Enhance protection structure	63	1	194.3	208.1	2	3302	2	30.9	3	30

Management Unit 12A – Paekakariki (South of Seawall) Erosion

Pathway	Short term	→	Medium term	→	Long term	MCDA ¹ Score	MCDA Ranking	Pathway total PV cost (\$m)	Cost + Loss ² (\$m)	Cost + Loss Ranking	VFM ³ (\$ '000/point)	VFM Ranking	Damages avoided ⁴ (\$m)	Damages avoided ranking	Number properties still exposed 2134
W-0	Baseline							8.4	97.1						59
W-4	Enhance Package	→	Re-establish the line with protection structure & dune reconstruction	→	Beach renourishment	61	2	133.9	167.9	1	2753	2	54.1	3	1
W-3	Enhance Package	→	Re-establish the line with protection structure	→	Enhance Seawall	63	1	135.1	168.9	2	2681	1	54.3	2	0
W-2	Enhance Package	→	Seawall	→	Re-establish the line with protection structure	54	3	143.7	177.5	3	3286	3	54.4	1	0

Management Unit 11B – Paekakariki Inundation

Pathway	Short term	→	Medium term	→	Long term	MCDA ¹ Score	MCDA Ranking	Pathway total PV cost (\$m)	Cost + Loss ² (\$m)	Cost + Loss Ranking	VFM ³ (\$ '000/point)	VFM Ranking	Damages avoided ⁴	Damages avoided ranking	Number buildings still exposed 213
PW-0	Baseline							6.9	7.0						5
PW-2	Status Quo & Enhance	→	Enhance Package	→	Accommodate Package	59	1	7.9	7.9	1	134	1	21,458	1	2
PW-1	Status Quo & Enhance	→	Enhance Package	→	Additional Hard Protection	51	2	10.3	10.3	2	202	2	10,425	3	4
PW-3	Status Quo & Enhance	→	Additional Hard Protection	→	Enhance New Inundation Protection	46	3	10.3	10.4	3	225	3	14,267	2	3

MCDA Scored Pathways vs Economic Ranked Pathways

Erosion Management Units

Unit	Top MCDA Scoring Pathway	Top Economic Ranked Pathway	Explanatory Notes
11A	Pathway 1/Pathway 3 (63)	Pathway 1/ Pathway 4 (58)	Pathway 1 ranks highest for 'Cost + Loss' and 'Value for Money', Pathway 4 ranks highest for 'Damages Avoided' because of higher number of potential properties effected being retreat. However , 'Damages Avoided' are very similar between Pathway 1 and Pathway 4.
12A	Pathway 3 (63)	Pathway 4 (61) / Pathway 3 (63) / Pathway 2 (54)	All pathways are within the same order of magnitude, only small differences change the rankings in the economic metrics.

Inundation Management Units

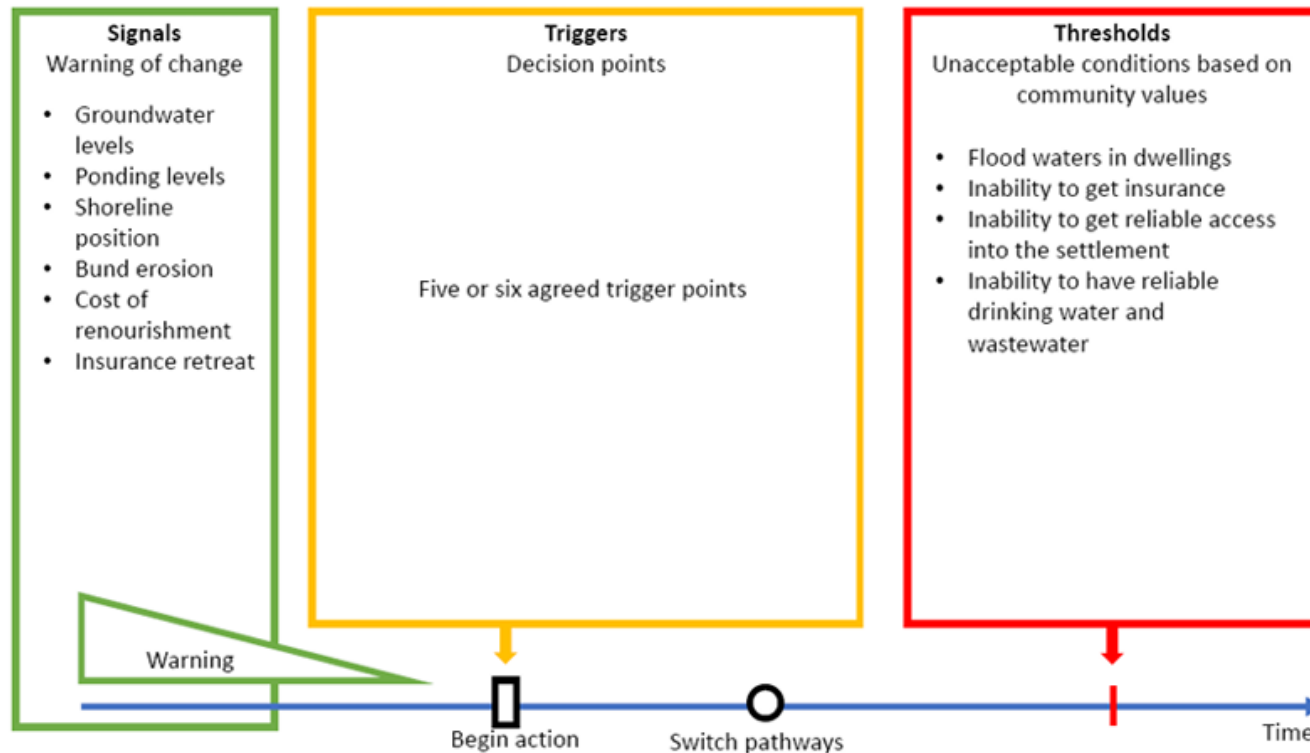
Unit	Top MCDA Scoring Pathway	Top Economic Ranked Pathway	Explanatory Notes
11B	Pathway 2 (59)	Pathway 2 (59)	

Signals, Triggers & Thresholds



= Signals and triggers determined by CAP to transition from one action to the next.

Note: This process will be covered in the 3 April 2024 CAP workshop for whole Kāpiti Coast District.



Examples of Thresholds

Threshold Name/Subject	Parameters
Insurance	X properties not able to get insurance in x years First property loses insurance Insurance premiums increases to become unaffordable
Inability to access beach to launch private boats	
Road access reduced due to inundation	X times in x years that people loose road access to their property
Septic tanks	Septic tank unable to be used x times in x years
Properties being damaged by inundation	X house x times in x years
Mahinga kai	Reduction in ability to gather shellfish

Going Forward

CAP -

- Finalise pathways
- Late May – complete our report to Council
- June – Present Report to Council

Post CAP

- Council initiate next phase



KCDC - Post Cap

- Next 12 – 18 months –
 - drafting planning rules and provisions
 - community consultation

BEFORE ANY IMPLEMENTATION DECISIONS ARE MADE

- LTP 2024-2034 – existing adaptation projects funding continued
- LTP 2027 – 2037 – new adaptation options considered

Source: Everything Kapiti – 23 April 2024

Questions ? ? ?



Takutai Kāpiti.



What is the DAPP approach?

The Dynamic Adaptive Planning Pathway approach (DAPP) is recommended by the Ministry for Environment as this approach aims to aid in development of plans that can adapt in situations of uncertainty. Using this approach will allow for a coastal adaptation plan that can adapt to the future changes that may be seen in the Kāpiti Coast District through the impacts of climate change. The DAPP approach can allow for future change and advancements without committing to investments that may be difficult and costly to adjust if the effects of climate change end up being different than those that have been projected for the future.

DAPP is like a roadmap that shows several different ways for getting to where we want to be in the future. You can start planning where you want to go now, but you still have the ability to change routes for getting there, or even your whole direction, as conditions change (or don't change as expected).

For Takutai Kāpiti, the development of our roadmap will include short-term, medium-term, and long-term options that will be tailored for each area in the Kāpiti district. Climate change is likely to have different implications for each of these areas, along with there being a difference in the protections already in place for them, so it is important to focus on each area separately to plan the best possible options for their unique needs.

Why is it beneficial for us to use the DAPP approach?

The DAPP approach is beneficial because although we have science to project the future impacts of climate change, there is no way of knowing precisely what will happen. Impacts in 50 or even 100-years time could change. We know that there will be an impact, but we have no way of precisely predicting the future. Trying to plan in advance for something that has possible unknown implications is tricky but still important. The DAPP approach allows for flexibility and adaptability to future conditions we cannot see yet.

Why does each pathway have several steps?

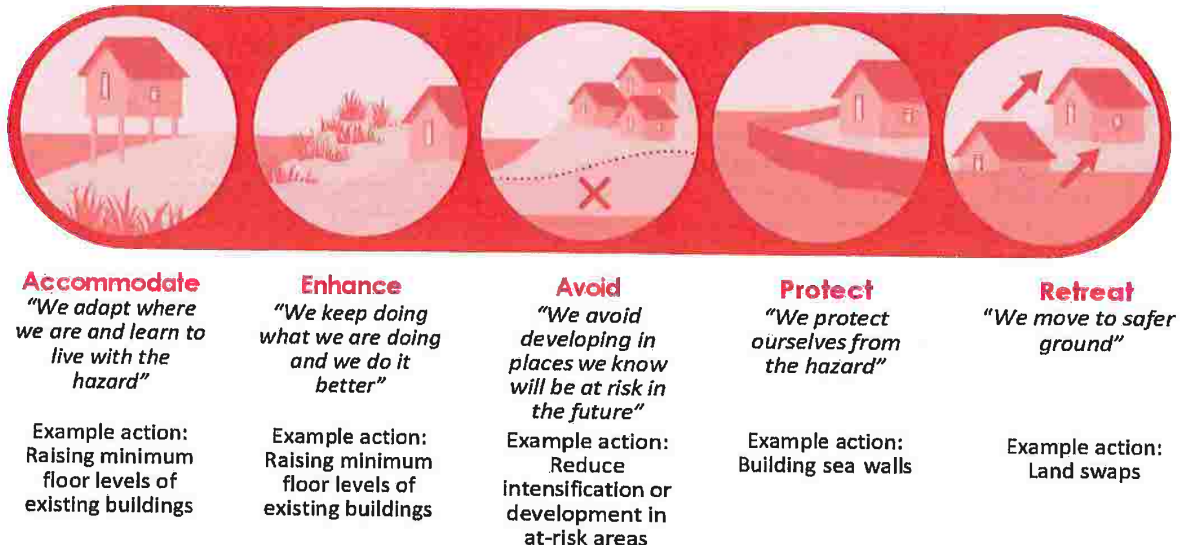
DAPP includes several pathways with multiple stages that are planned to be enacted at certain points in the future if and when the climate situation changes. We have no way of knowing for certain what impacts future sea level rise and climate change will have on our district, so having several steps along these pathways allows for flexibility and adaptability to the new set of circumstances in the short, medium and long-term.

At what points in the process is the community consulted for feedback?

Throughout the process, CAP will engage both independently and in facilitated environments to gauge community feedback on the development of the preferred pathways. The CAP acts as the conduit and community voice for input into the Coastal Hazards Adaptation Recommendation Report to Council. The specific points in the process where the community is consulted for their feedback are through the CAP community engagement workshops that happened at the beginning of the process for each adaptation area, and after CAP have decided on their draft pathway options but before they submit their Recommendation Report to Council.

What are our options?

The different steps in the pathways are adaptation 'options'. Options is the broader term that groups the different types of actions. Each step in the pathway has options and actions. For example, a pathway could include an 'Enhance' option, a 'Protect' option, and then a 'Retreat' option. The timeframes for progressing these three options would depend on when "signals" of change (agreed with you) occur in real-time ("the trigger"), at a level that requires action ("the threshold"). The "Avoid" option is included in all pathways through land-use planning. Our umbrella options with an example of one of the actions that may be considered under each are:



How is the preferred pathway decided for each area?

The Multiple Criteria Decision Analysis (MCDA) decision tool is being used for the Takutai Kāpiti project to assist the Coastal Advisory Panel (CAP) in identifying which options are best suited for the area. This tool involves scoring each pathway option against eight criteria.

When do you move to the next steps in the pathway?

Adaptation planning relies on signals, triggers, and thresholds to determine when a change to the current management approach is required. The most critical element to this working is that, they are not time bound steps and, we work with you to agree on the signals of change; triggers for action; and thresholds for action that we set.

- Signals are the things we are monitoring to determine when change is needed. For example, we can monitor the rate of erosion to determine how the coast is responding to sea level rise.
- Triggers are the point when we need to change the management option. The triggers need to consider management approaches and timeframes to implement these. In some cases, these may be reached 10 years prior to a threshold being reached. A trigger might be when erosion reaches a certain distance from the nearest dwelling.
- Thresholds are the point where the level of risk or damage is no longer acceptable under the current management option. These need to be set by the community or asset owner. For example, you might be okay with ankle deep water around your dwelling once a year, but you're not happy with water ponding around your dwelling all winter. We therefore need to plan to adapt before this happens.

Part of CAP's work will be identifying "optional thresholds" for further community discussion. Detailed triggers, signals and thresholds will be agreed with each community after the Coastal Advisory Panel provides their Recommendation Report to Council.

Takutai Kāpiti.

The CAP proposes recommending the following approach to managing coastal hazards in the District Plan:

- Use of a risk-based approach similar to that adopted by Porirua City Council and Wellington City Council in their recent District Plan reviews.
- Coastal hazards planning rules and provisions will constrain subdivision, use and development according to levels of risk.
- Risk areas will be mapped based on the best available information including relevant national and regional direction (NZCPS & RPS) and the most up to date IPCC information and relevant national guidance.

Note: The mapping, planning provisions and rules will be developed by Council district planners after Takutai Kāpiti in partnership with mana whenua and consultation with the community.

Do you agree with the CAP's proposed approach to managing coastal hazards in the District Plan?

Please give your feedback on one of the cards provided.

**Independent
Coastal Advisory
Panel wants your
feedback**

Optional Thresholds

**Takutai
Kāpiti.**

Signals, triggers and thresholds determine when a change to the current management approach is required and means change only happens when, and if, the situation changes.

- Thresholds are situations or scenarios that people don't want to see happen in their community and are to be avoided by implementing further adaptation options. We can avoid reaching adaptation thresholds through signals and triggers.
- Signals are changes that provide an early warning a trigger is approaching, such as monitoring the rate of erosion for a section of the coast.
- Triggers are measures that, when reached, provide ample time to plan for and implement a new pathway or adaptation option so the threshold isn't reached.

The Coastal Advisory Panel has developed an initial set of draft Optional Thresholds to recommend to Council to develop further with communities after Takutai Kāpiti is completed.

There are purposely blanks indicated by 'X' left below as these details will be decided in consultation with each community after Takutai Kāpiti.

		CAP wants to know if you think these threshold topics are applicable to the adaptation area							
Optional topic	Possible threshold for each topic	Northern Adaptation Area		Central Adaptation Area		Raumati Adaptation Area		Paekākāriki Adaptation Area	
		Erosion	Inundation	Erosion	Inundation	Erosion	Inundation	Erosion	Inundation
Insurance	<ul style="list-style-type: none"> • X number of dwellings are unable to obtain insurance for coastal hazards. • The cost of insurance for a X number of properties exceeds \$X amount per annum making it unaffordable for the community. 	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Frequency of coastal flooding	X metres or more of water ponds at specified location/s for a continuous period of more than X number of days.	No	Yes	No	Yes	No	Yes	No	Yes
Depth of flooding	Water enters X number of dwellings within a specific community X number of times in X number of years.	No	Yes	No	Yes	No	Yes	No	Yes
Water infrastructure	Drinking water and wastewater infrastructure within X metres of the position of Mean High Water Springs.	Yes	No	Yes	No	Yes	No	Yes	No
Road access	Access to properties is unavailable for more than X hours, X times in X years.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Telecommunication / power services	Coastal hazards result in telecommunication and/or power outages for more than X hours X times in X years.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Septic tanks	<ul style="list-style-type: none"> • Septic tank systems are operationally impacted for more than X days per year. • Septic tanks are unable to be used X times in X years. 	Yes	Yes	No	No	No	No	Yes	Yes

		northern Adaptation Area		Central Adaptation Area		kaumati Adaptation Area		Paekakariki Adaptation Area	
		Erosion	Inundation	Erosion	Inundation	Erosion	Inundation	Erosion	Inundation
Foreshore access	It is no longer possible to walk along the foreshore of X beach during X tide.	Yes	No	Yes	No	Yes	No	Yes	No
Beach access	• Safe public access at specified location/s is damaged X times over X years.	Yes	No	Yes	No	Yes	No	Yes	No
	• Safe public access to launch boats at specified location/s] is damaged X times over X years.	Yes	No	Yes	Yes	Yes	No	No	No
Seawall	The seawall requires significant maintenance and reinforcement exceeding \$X, X times, in X years.	No	No	No	No	Yes	No	Yes	No
Dune volume	The dunes at X beach are less than X metres in width, or height, or Xm³ in volume.	Yes	Yes	Yes	Yes	No	No	No	No
Significant event	• Any serious injuries and/or fatalities that occur as a result of a coastal erosion or coastal inundation event. • A coastal storm significantly compromises the effectiveness of the existing inundation (or erosion) protection structures.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cost of public maintenance	• The overall cost of the current publically funded management approach exceeds \$X per year. • A targeted rate of more than \$X per year is required to fund the ongoing publically funded maintenance of current management approach.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cost of private maintenance	The cost to maintain or replace privately owned seawalls exceeds what X number of property owners are prepared to pay.	No	No	No	No	Yes	No	Yes	No
Recovery time between events	• X community is required to respond to X significant coastal storms within X number of years. • Emergency works costing over \$X are required at X frequency to repair protection structures at X location.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shore bird habitats	The habitat of X species is reduced.	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Mahinga kai	Shellfish are no longer able to be gathered from X location.	Yes	Yes	Yes	Yes	Yes	No	Yes	No

11A

Erosion

Paekākāriki Seawall

Paekākāriki Adaptation Area

**Takutai
Kāpiti.**

Pathway 1

MCDA
Score **63**

MCDA
Ranking **1=**

Short term

Status Quo &
Enhance

Planned works in the LTP for like-for-like replacement of the Paekākāriki sea wall, increased community education and emergency management.

Medium term

Protect -
Sea Wall

New coordinated sea wall along the same alignment as the Paekākāriki sea wall.

Long term

Re-establish
the line with
a protection
structure

A hybrid approach of retreat and hard engineering that involves retreating the minimum number of properties possible and re-establishing the shoreline landward of the existing shoreline with a new protection structure.

Cost + Loss
\$206.4M

Cost + Loss
Ranking
1

Damages
Avoided
\$38.3M

Total Pathway Cost

\$200.1M

Damages
Avoided
Ranking
2

Number of
Properties Still
Exposed (2130)
30

Pathway 3

MCDA
Score **63**

MCDA
Ranking **1=**

Short term

Status Quo &
Enhance

Planned works in the LTP for like-for-like replacement of the Paekākāriki sea wall, increased community education and emergency management.

Medium term

Re-establish
the line with
a protection
structure

A hybrid approach of retreat and hard engineering that involves retreating the minimum number of properties possible and re-establishing the shoreline landward of the existing shoreline with a protection structure.

Long term

Enhance
protection
structure

Add material to the protection structure to increase resilience and design life.

Cost + Loss
\$208.1M

Cost + Loss
Ranking
2

Damages
Avoided
\$30.9M

Total Pathway Cost

\$194.3M

Damages
Avoided
Ranking
3

Number of
Properties Still
Exposed (2130)
30

Pathway 4

MCDA
Score **58**

MCDA
Ranking **3**

Short term

Status Quo &
Enhance

Planned works in the LTP for like-for-like replacement of the Paekākāriki sea wall, increased community education and emergency management.

Medium term

Re-establish
the line with
protection
structure & dune
reconstruction

A hybrid approach of retreat and hard engineering that involves retreating the minimum number of properties possible and re-establishing the shoreline landward of the existing shoreline with a new protection structure. Dune reconstruction to be undertaken in front of the structure to provide additional protection.

Long term

Protect - Beach
renourishment

Adding sediment to the beach system, either onshore or in the nearshore to maintain the dune re-construction undertaken in the medium term

Cost + Loss
\$275.3M

Cost + Loss
Ranking
3

Damages
Avoided
\$39.2M

Total Pathway Cost

\$269.9M

Damages
Avoided
Ranking
1

Number of
Properties Still
Exposed (2130)
1

11B Paekākāriki

Inundation

Paekākāriki Adaptation Area

**Takutai
Kāpiti.**

Pathway 2

MCDA
Score **59**

MCDA
Ranking **1**

Short term

Status Quo &
Enhance

Maintain existing management infrastructure, increase community education and emergency management.

Medium term

Enhance
Package

Enhance existing inundation protection and increase community education and emergency management.

Long term

Accommodate
Package

Pro-actively raise floors of homes which could be flooded, and/or flood proof homes and infrastructure.

Cost + Loss
\$7.9M

Cost + Loss
Ranking
1

Damages
Avoided
\$21,458

Total Pathway Cost

\$7.9M

Damages
Avoided
Ranking
1

Number of
Buildings Still
Exposed (2130)
2

Pathway 1

MCDA
Score **51**

MCDA
Ranking **2**

Short term

Status Quo &
Enhance

Maintain existing management infrastructure, increase community education and emergency management.

Medium term

Enhance
Package

Enhance existing inundation protection and increase community education and emergency management.

Long term

Additional Hard
Protection

Installation of earth bunds/stopbanks to prevent sea water entering the settlement.

Cost + Loss
\$10.3M

Cost + Loss
Ranking
2

Damages
Avoided
\$10,425

Total Pathway Cost

\$10.3M

Damages
Avoided
Ranking
3

Number of
Buildings Still
Exposed (2130)
4

Pathway 3

MCDA
Score **46**

MCDA
Ranking **3**

Short term

Status Quo &
Enhance

Maintain existing management infrastructure, increase community education and emergency management.

Medium term

Additional Hard
Protection

Installation of earth bunds/stopbanks to prevent sea water entering the settlement.

Long term

Enhance New
Inundation
Protection

Enhance existing flood protection infrastructure.

Cost + Loss
\$10.4M

Cost + Loss
Ranking
3

Damages
Avoided
\$14,267

Total Pathway Cost

\$10.3M

Damages
Avoided
Ranking
2

Number of
Buildings Still
Exposed (2130)
3

12A

Erosion

Paekākāriki South

Paekākāriki Adaptation Area

**Takutai
Kāpiti.**

Pathway 3

MCDA
Score **63**

MCDA
Ranking **1**

Short term

Enhance
Package

Private owners increase the resilience of their structures by adding material to existing structures and increasing community education and emergency management.

Medium term

Re-establish the
line with protection
structure

A hybrid approach of retreat and hard engineering that involves retreating the minimum number of properties possible and re-establishing the shoreline landward of the existing shoreline with a new protection structure.

Long term

Enhance Seawall

Enhance and maintain the setback sea wall as the shoreline retreats back to that position.

Cost + Loss
\$168.9M

Cost + Loss
Ranking
2

Damages
Avoided
\$54.3M

Total Pathway Cost

\$135.1M

Damages
Avoided
Ranking
2

Number of
Properties Still
Exposed (2130)
0

Pathway 4

MCDA
Score **61**

MCDA
Ranking **2**

Short term

Enhance
Package

Private owners increase the resilience of their structures by adding material to existing structures and increase community education and emergency management.

Medium term

Re-establish the
line with protection
structure & dune
reconstruction

A hybrid approach of retreat and hard engineering that involves retreating the minimum number of properties possible and re-establishing the shoreline landward of the existing shoreline with a protection structure. Dune reconstruction to be undertaken in front of the seawall to provide additional protection.

Long term

Protect - Beach
renourishment

Adding sediment to the beach system, either onshore or in the nearshore to maintain the dune re-construction undertaken in the medium term.

Cost + Loss
\$167.9M

Cost + Loss
Ranking
1

Damages
Avoided
\$54.1M

Total Pathway Cost

\$133.9M

Damages
Avoided
Ranking
3

Number of
Properties Still
Exposed (2130)
1

Pathway 2

MCDA
Score **54**

MCDA
Ranking **3**

Short term

Enhance
Package

Private owners increase the resilience of their structures by adding material to existing structures and increase community education and emergency management.

Medium term

Protect - Seawall

New coordinated sea wall along current sea wall alignment in front of the properties.

Long term

Re-establish the
line with protection
structure

A hybrid approach of retreat and hard engineering that involves retreating the minimum number of properties possible and re-establishing the shoreline landward of the existing shoreline with a new protection structure.

Cost + Loss
\$177.5M

Cost + Loss
Ranking
3

Damages
Avoided
\$54.4M

Total Pathway Cost

\$143.7M

Damages
Avoided
Ranking
1

Number of
Properties Still
Exposed (2130)
0