

9A

Erosion

Raumati North

Raumati Adaptation Area

Takutai Kāpiti.

Pathway 4

MCDA
Score **53**

MCDA
Ranking **1**

Short term

Enhance

Private owners increase the resilience of their structures by adding material to existing structures (e.g. sea walls) and increased community education and emergency management.

Medium term

Re-establish the line with a setback seawall and 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 constructed sea wall to provide additional resilience. Dune reconstruction to be undertaken in front of the sea wall to provide additional resilience.

Long term

Soft Engineering Protection (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
\$337.6M

Cost + Loss
Ranking
2

Damages
Avoided
\$102.7M

Total Pathway Cost

\$269.6M

Damages
Avoided
Ranking
2

Number of
Properties Still
Exposed (2130)
4

Pathway 2

MCDA
Score **52**

MCDA
Ranking **2=**

Short term

Enhance

Private owners increase the resilience of their structures by adding material to existing structures (e.g. sea walls) and increased community education and emergency management.

Medium term

Hard Engineering – Sea Wall

New coordinated sea wall along the front of properties along existing shoreline position.

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
\$339.5M

Cost + Loss
Ranking
3

Damages
Avoided
\$103.6M

Total Pathway Cost

\$272.4M

Damages
Avoided
Ranking
1

Number of
Properties Still
Exposed (2130)
14

Pathway 6

MCDA
Score **52**

MCDA
Ranking **2=**

Short term

Hard Engineering – Sea Wall

New coordinated sea wall along the front of properties along existing shoreline position.

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 sea wall

Add material to the sea wall to increase resilience.

Cost + Loss
\$325.5M

Cost + Loss
Ranking
1

Damages
Avoided
\$99.7M

Total Pathway Cost

\$254.5M

Damages
Avoided
Ranking
3

Number of
Properties Still
Exposed (2130)
14

9B

Inundation

Raumati

Raumati Adaptation Area

Takutai Kāpiti.

Pathway 2

MCDA
Score **55**

MCDA
Ranking **1**

Short term

Status Quo &
Enhance

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

Medium term

Enhance

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

Long term

Accommodate

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

Cost + Loss
\$16.6M

Cost + Loss
Ranking

2

Damages
Avoided
\$0.6M

Total Pathway Cost

\$16.2M

Damages
Avoided
Ranking

1=

Number of
Buildings Still
Exposed (2130)

29

Pathway 1

MCDA
Score **54**

MCDA
Ranking **2**

Short term

Status Quo &
Enhance

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

Medium term

Enhance

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

Long term

Additional Hard
Protection

Installation of floodgates, pump stations and stopbanks to prevent sea water entering the settlements.

Cost + Loss
\$20.1M

Cost + Loss
Ranking

3

Damages
Avoided
\$0.6M

Total Pathway Cost

\$19.7M

Damages
Avoided
Ranking

1=

Number of
Buildings Still
Exposed (2130)

34

Pathway 3

MCDA
Score **51**

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 floodgates, pump stations and stopbanks to prevent sea water entering the settlements.

Long term

Enhance

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

Cost + Loss
\$8.4M

Cost + Loss
Ranking

1

Damages
Avoided
\$0.3M

Total Pathway Cost

\$7.7M

Damages
Avoided
Ranking

3

Number of
Buildings Still
Exposed (2130)

48

10A

Erosion

Raumati South

Raumati Adaptation Area

Takutai Kāpiti.

Pathway 2

MCDA
Score **57**

MCDA
Ranking **1**

Short term

Status Quo &
Enhance

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

Medium term

Enhance sea wall

Adding material to the sea wall to increase resilience and design life and increased community education and emergency management.

Long term

Re-establish the
line with a setback
seawall and 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 constructed sea wall. Dune reconstruction to be undertaken in front of the seawall to provide additional protection.

Cost + Loss
\$561.5M

Cost + Loss
Ranking
1

Damages
Avoided
\$229.9M

Total Pathway Cost

\$422.4M

Damages
Avoided
Ranking
1

Number of
Properties Still
Exposed (2130)
7

Pathway 5

MCDA
Score **53**

MCDA
Ranking **2**

Short term

Status Quo &
Enhance

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

Medium term

Re-establish the
line with a setback
seawall and 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 constructed sea wall. Dune reconstruction to be undertaken in front of the seawall to provide additional protection.

Long term

Soft Engineering
Protection
(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
\$579.4M

Cost + Loss
Ranking
3

Damages
Avoided
\$227.4M

Total Pathway Cost

\$437.8M

Damages
Avoided
Ranking
2

Number of
Properties Still
Exposed (2130)
7

Pathway 4

MCDA
Score **52**

MCDA
Ranking **3**

Short term

Status Quo &
Enhance

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

Medium term

Re-establish the
line with a setback
sea wall

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 sea wall

Enhance and maintain the setback sea wall as the shoreline retreats back to that position so that the setback seawall can hold the line.

Cost + Loss
\$574.4M

Cost + Loss
Ranking
2

Damages
Avoided
\$226.4M

Total Pathway Cost

\$431.8M

Damages
Avoided
Ranking
3

Number of
Properties Still
Exposed (2130)
7