

FACT SHEET

Carnarvon and Coral Bay Coastal Hazard Risk Management and Adaption Plan (CHRMAP)

Erosion and inundation are an increasing risk for the coastal portions of the Shire of Carnarvon.

Looking after our waterways and coastline is crucial for our community.

WHAT IS A COASTAL HAZARD RISK MANAGEMENT AND ADAPTATION PLAN (CHRMAP)?

A Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is a strategic planning document that outlines a long-term approach to managing the impacts of coastal hazards on our coastline.

It considers a range of hazard scenarios over 25-, 50- and 100-year timeframes and examines potential impacts under projected climate change and sea level rise.

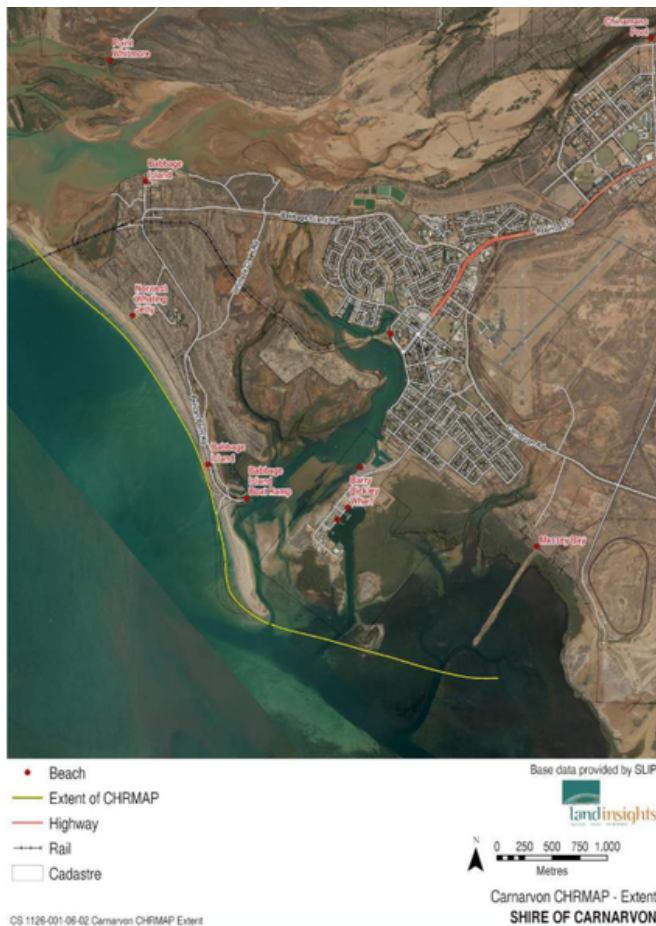
WHY IS THE CHRMAP IMPORTANT FOR CARNARVON AND CORAL BAY?

Carnarvon and Coral Bay's coastlines support tourism, recreation, infrastructure, environmental values, and local livelihoods. Managing coastal risks is essential to protect these assets for current and future generations. The CHRMAP provides a clear understanding of risks associated with coastal erosion and inundation and helps ensure decisions about development, infrastructure, and land use are informed by long-term considerations.

By guiding the appropriate development, maintenance, and renewal of public infrastructure such as foreshore areas, car parks, toilet facilities, and jetties, the CHRMAP supports the long-term resilience of coastal assets. It also helps prioritise shoreline stabilisation works and ensures new development is appropriately protected from coastal hazards.

For landowners and developers, the CHRMAP provides greater certainty when purchasing or developing property in areas at risk, reducing the need for site-specific coastal risk assessments. It also strengthens the Shire's ability to advocate for State and national funding for coastal management works, supporting ongoing investment in the region's coastline.

What areas are effected?



Who is leading the CHRMAP project?

The Shire of Carnarvon is leading this project with support from a Steering Committee comprising:

- Department of Planning, Lands and Heritage
- Department of Transport and Major Infrastructure

The Shire is also supported by specialist consultants with expertise in coastal hazard assessment, planning, economic analysis, and community engagement.

What are coastal values?

There are a number of documents that provide further guidance on coastal values, including the Shire's CHRMAP (once completed), and the State Planning Policy 2.6 State Coastal Planning Policy which can provide further information.

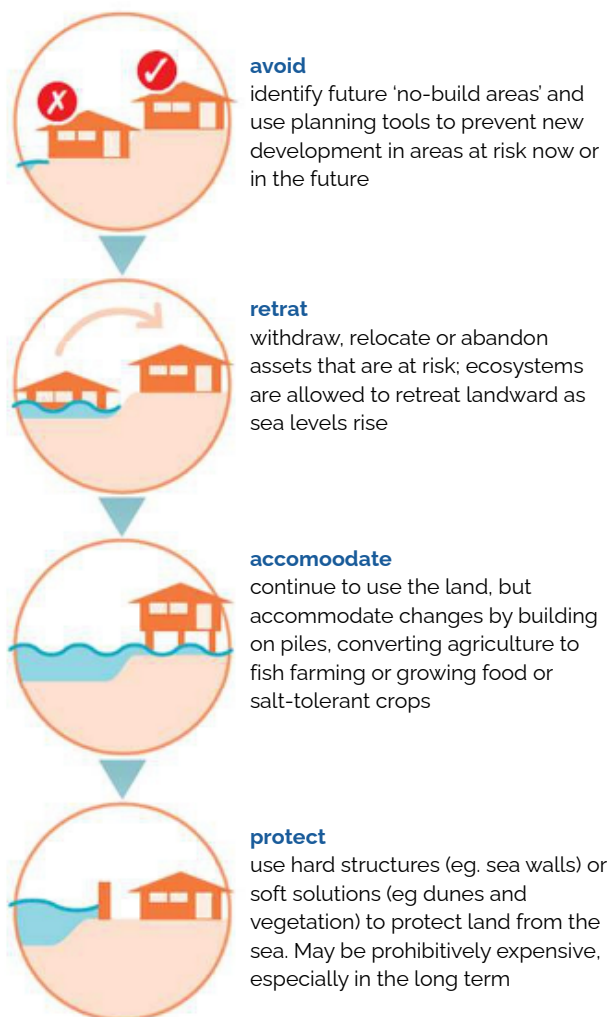
What are coastal Hazards?

'Coastal hazards' means naturally occurring events that impact our coastline, such as coastal erosion or flooding (also referred to as inundation).

Erosion is a process where parts of the shoreline are worn away due to waves, tides, wind or human activities. It can change the shape and form of the coast, reducing the area between the ocean and features on the land, and even allowing inundation.

Inundation is when water occupies previously dry land. It can be temporary or permanent:

- Permanent inundation refers to the loss of land due to sea level rise.
- Temporary inundation is the flooding of an area due to storm surge, high tides or large waves.



What might be the strategies and options for managing coastal hazards?

There are four overarching 'strategies' for managing coastal hazards. These are:

AVOID (erosion and inundation)

Identify 'non-build' areas for the future which ensure development does not occur within hazard areas.

MANAGED RETREAT (erosion and inundation)

Continue to use assets until such time as the coastal hazard risk is too high. At that point withdraw or relocate assets at risk.

ACCOMMODATE (for inundation)

Continue to use the land but accommodate changes through building design (eg. raised floor levels, structures that can withstand flooding) or converting land use.

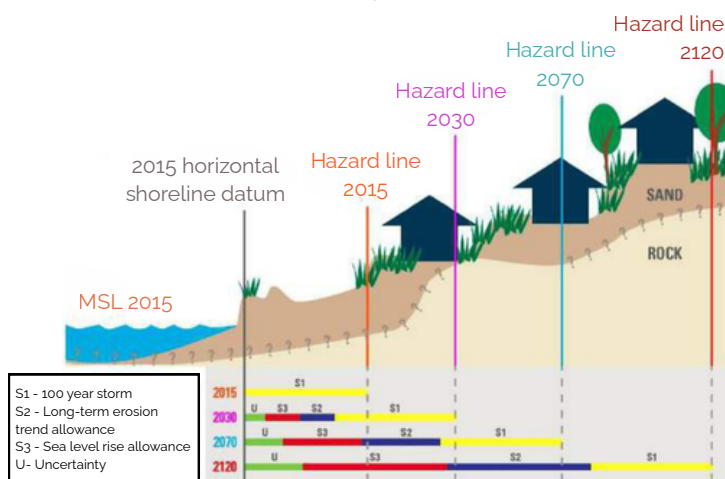
PROTECT (erosion and inundation)

Use hard engineering or nature based solutions to protect land from the impacts of coastal hazard (eg seawalls, revetments, sand nourishment).

Within the strategies chosen, the CHRMAP can further specify options to manage coastal hazards.

These include, but are not limited to:

- Building Design
- Planning Controls
- Engineered Structures (e.g. Seawalls, Groynes, Breakwaters, Revetments)
- Nature Based Solutions (e.g., Beach nourishment, planting)





Where can I learn more about coastal hazard planning?

Coastal Hazard planning is guided by State Planning Policy 2.6 Coastal Hazard Planning and by the State Coastal

Planning Policy Guidelines. These documents provide the planning framework which guides coastal hazard planning in Western Australia.

Links to these key documents are below:

- [State Planning Policy 2.6 - Coastal planning](#)
- [GD_CST_coastal_hazard_risk_managementguidelines-July2019.pdf](#)

More detail relating to the planning framework is provided below.

What planning documents apply locally?

At a local level, planning is guided by the Local Planning Strategy, Local Planning Scheme, and relevant Local Planning Policies. These documents guide land use, development, and coastal management in Carnarvon and Coral Bay. As part of the CHRMAP (once completed), the current planning framework will be reviewed and recommendations may be made where necessary.

As someone who lives, works and / or recreates in the Carnarvon and Coral Bay area, how could the outcomes of the CHRMAP affect me?

The CHRMAP is prepared by the Shire to guide decision making and management of the Towns shoreline areas. This is a strategic plan for managing coastal hazards on the coastline and it is important for the community and key stakeholders to be involved so that the CHRMAP accurately reflects their values and aspirations for what is important along the coastline.

For instance, you may frequently visit a local beach. How would you feel or how would you be impacted if this beach was affected by erosion and inundation? Is it important for this type of asset to remain for the next generation to use and enjoy?

It is essential that you get involved as we ask the community and key stakeholders for their input on preferred management options – that is – what can we do to manage the risk from erosion and flooding?

WHAT DOES THE ENGAGEMENT PROGRAM INVOLVE?

The Shire and project team will be available to discuss the project at pop-ups (drop-in sessions) to discuss the CHRMAP with the community, the dates of which can be found below. Following this engagement, feedback will be analysed and gathered into an outcomes report which will be used to inform the draft of the CHRMAP.

WHEN IS THE ENGAGEMENT HAPPENING? WHEN CAN I BE INVOLVED?

Community and stakeholder engagement is crucial to the CHRMAP process. There will be a few opportunities for the community and stakeholders to have their say throughout the CHRMAP project.

CARNARVON

DAY 25th August

- 11am - 12:30pm, Woolshed
- 4:30pm - 6:30pm, Woolshed

CORAL BAY

DAY 26th August

- 11am - 1pm, Bill's Bar



Where can I get information on the project?

If you require further information, please contact:

- Stefan Louw - Executive Manager Community Planning & Sustainability
- 0474 500 960
- louw.c@carnarvon.wa.gov.au

What is a Benefit Distribution Analysis? And how does it relate to the CHRMAP?

Benefit Distribution Analysis (BDA) is recommended to be undertaken as part of a CHRMAP process to identify funding models for any recommended adaptation option.

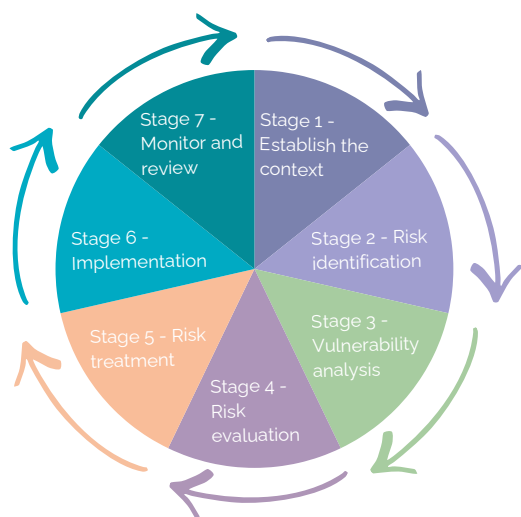
A BDA looks at three things:

- 1 Who benefits from an adaptation investment/funding (a change to mitigate risk)
- 2 How much they benefit
- 3 When they benefit and for how long

A BDA is used so that a 'beneficiary pays principle' can be applied to guide cost recovery for investment and funding.

This CHRMAP draft has included a BDA to help determine appropriate funding pathways for adaptation recommendations.

CHRMAP preparation Stages



What other planning documents guide coastal hazard planning in Western Australia?

A range of planning documents are in place at a state government and local government level which guide coastal hazard planning. At a state government level these include the Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations) and State Planning Policy 2.6 Coastal Planning. The Regulations provide information regarding a range of matters including how to prepare local planning policies, structure plans and special control areas.

At a local level, the Shire of Carnarvon has a range of planning documents that must be considered when making decisions, including the Local Planning Strategy, Local Planning Scheme, and relevant Local Planning Policies. These documents guide land use, development, and coastal planning to support sustainable growth and community resilience.

As part of the CHRMAP (once completed), the current planning framework will be reviewed, and recommendations for further changes may be made where necessary.

What Will Be the Project's Outcomes?

The Shire of Carnarvon CHRMAP delivers a structured, evidence-based framework to manage coastal erosion and inundation risks across Carnarvon and Coral Bay.

The CHRMAP outcomes include:

- Identification of areas, infrastructure and assets most at risk from coastal hazards.
- Development of practical adaptation pathways and management responses in line with State coastal planning policies.
- Recommended planning controls, including setbacks, development standards and updates to local planning documents.
- Guidance on infrastructure, drainage and asset management to improve resilience to coastal impacts.
- An implementation plan outlining priority actions, responsibilities and potential funding sources.
- A monitoring and review program to ensure the plan remains current and responsive to changing conditions.



Shire of Carnarvon

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