















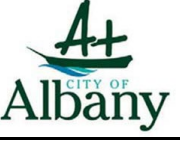




# Coastal Hazard Risk Management and Adaptation Plans in WA<sup>1</sup>

Region	Project Title	Project Manager/ Reference Details	Study Area	Project Summary	Project Status
Kimberley	<a href="#">Broome Townsite Coastal Hazard Risk Management and Adaptation Plan (2017)</a> 	Baird Australia prepared for the Shire of Broome	Broome Townsite	The Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) will inform the community about potential risks; identify community and cultural values as well as key coastal infrastructure and assets; and provide a clear pathway for the Shire of Broome and partners to address coastal hazard risks over time. Ultimately, the CHRMAP will guide investment decision by the Shire in terms of the location and maintenance of coastal infrastructure, and provide guidance for the development of statutory planning controls.	Completed
	<a href="#">Derby Coastal Hazard Risk Management and Adaptation Plan (2017)</a> 	Shire of Derby/West Kimberley and RFF	Derby Townsite and immediate surroundings	The Shire completed a CHRMAP to evaluate and prioritise the likelihood and consequence of the identified risk, especially in relations to key assets (e.g. Derby town site, Derby Wharf and Derby Airport). The CHRMAP will inform the assessment of statutory and strategic planning decisions within the coastal zone, including developing a local planning policy to guide development with the coastal zone.	Completed
Pilbara	<a href="#">City of Karratha Coastal Hazard Risk Management and Adaptation Plan (2014)</a> 	City of Karratha	Karratha, Dampier, Point Sampson, Roebourne and Wickham	The purpose of this CHRMAP it to provide strategic guidance to decision makers on the application of a risk assessment and management framework in relation to applications for planning approval relating to land identified as being vulnerable to coastal hazards. The CHRMAP is currently being reviewed.	Under review
	<a href="#">Onslow Coastal Hazard Risk Management and Adaptation Plan (2017)</a> 	Shire of Ashburton	Onslow coast	The CHRMAP has been prepared to provide a long-term view of the possible strategies to adapt to the changing future conditions that will impact the current town. A key aspect for the future of the town is the threat of steadily rising sea levels, combined with storm events - ocean storm surge, local rainfall-induced flooding and rising water tables – that will affect the viability of low lying areas of the town. In addition, coastal erosion is likely to threaten some infrastructure in the lee of the present Town Beach, including the Bindi Bindi community area. Strategies that might be adopted to respond to these threats at significant future turning points are articulated in this plan.	Completed
	<a href="#">Port Hedland Townsite Coastal Hazard Risk Management and Adaptation Plan (2019)</a> 	Town of Port Hedland	Port Hedland townsite	The Town of Port Hedland has identified the vulnerability of the Port Hedland townsite to coastal processes through a CHRMAP project. The project supports the state government's State Planning Policy No. 2.6 State Coastal Planning Policy (SPP2.6), which recommends a risk management approach for decision making relating to coastal hazards.	Completed
Gascoyne	<a href="#">Denham Townsite Coastal Hazard Risk Management Risk and Adaptation Plan (2020)</a> 	Water Technology for the Shire of Shark Bay	Denham townsite	The Denham Townsite CHRMAP identifies coastal hazards, evaluates their likelihood and consequences for specific assets, and identifies management and adaptation responses to the risk as well as prioritisation of these responses. It also informs the community about potential coastal hazard risks; identifies community and cultural values as well as key coastal infrastructure and assets at risk; and provides a clear pathway for the Shire of Shark Bay to address coastal hazard risks over time.	Completed
	<a href="#">Carnarvon and Coral Bay Townsites Coastal Hazard Risk Management and Adaptation Plan</a> 	Shire of Carnarvon	Carnarvon and Coral Bay Townsites	The Shire of Carnarvon is currently preparing a CHRMAP for the Carnarvon and Coral Bay townsites. The project will ensure the Shire of can plan for and adapt to future coastal hazard risk and support appropriate future development. The CHRMAP is due for completion in late 2024.	Underway
	<a href="#">Exmouth Townsite Coastal Hazard Risk Management and Adaptation Plan</a> 	Seashore Engineering for the Shire of Exmouth	Exmouth townsite	The Shire of Exmouth is currently preparing a CHRMAP for the Exmouth townsite. The CHRMAP will set the framework for the assessment of coastal risk over time, and by identifying coastal hazards, analyse the vulnerability for specific assets. it will provide the basis for identifying and prioritising management and adaptation responses. The CHRMAP is due for completion in early 2024.	Underway
Mid West	<a href="#">Shire of Irwin Coastal Hazard Risk Management and Adaptation Plan (2016)</a> 	Shire of Irwin, Curtin University and Northern Agricultural Catchments Council	Shire of Irwin coastline	The CHRMAP provides strategic guidance on coordinated, integrated and sustainable management and adaptation for land use and development in the coastal zone. Specifically, this CHRMAP provides information on the effects of coastal hazards; presents a decision-making framework to assess the associated risks; highlights coastal hazard areas in terms of vulnerability and risk; and suggests possible adaptation options.	Completed

	<p><a href="#">Geraldton Coastal Hazard Risk Management and Adaptation Planning Project (2018)</a></p> 	Baird Australia for the City of Greater Geraldton	Cape Burney to Drummond Cove coastline	The City of Greater Geraldton has completed a suite of studies indicated that portions of the coastline are at risk from inundation and erosion coastal hazards over a 100-year planning timeframe. The City is adopting a risk management and adaptation planning approach to deal with the adverse impacts of coastal hazards. This approach will ensure these hazards are appropriately factored into decision making processes regarding assets at risk or potentially at risk, sustainable land use and any future development.	Completed
	<p><a href="#">Horrocks Beach Coastal Hazard Risk Management and Adaptation Plan (2020)</a></p> 	GHD for the Shire of Northampton	Horrocks Beach	The CHRMAP identifies the potential extent of coastal hazards over a 100-year planning timeframe, evaluates their likelihood and consequences for specific assets, and identifies management and adaptation responses to the risk.	Completed
Wheatbelt	<p><a href="#">Gingin Coastal Hazard Risk Management and Adaptation Plan (2019)</a></p> 	Shire of Gingin	Lancelin, Ledge Point and Seabird	The Shire of Gingin has prepared a CHRMAP for the Shire's coastal settlements, including Seabird, Ledge Point and Lancelin. It was prepared to provide a long-term view of the potential future coastal erosion impacts to the coastal towns and provide possible strategies to adapt to the changing coastal conditions. The CHRMAP is currently being reviewed to include the findings of an inundation study and is due for completion in early 2024.	Under review
	<p><a href="#">Dandaragan Coastal Hazard Risk Management and Adaptation Plan (2018)</a></p> 	Shire of Dandaragan	Cervantes and Jurien Bay	The Shire of Dandaragan has prepared a CHRMAP for the Shire's coastal settlements, including Cervantes and Jurien Bay. The CHRMAP identifies areas and assets vulnerable to coastal erosion and sea level rise, and provides strategies to help minimise the risk and preserve coastal values.	Completed
Perth	<p><a href="#">City of Cockburn Coastal Adaptation Plan (2015)</a></p> 	Cockburn Sound Coastal Alliance and the City of Cockburn	City of Cockburn coast	The plan provides a decision-making framework and recommended adaptation pathways and actions to assist the City of Cockburn adapt to coastal risks in the immediate and long-term. This plan has been prepared to adapt to the changing coast, and provides recommended timeframes and trigger points for decision-making and planning for the Cockburn coast from South Beach to Naval Base. The plan is currently under review with the City preparing a full CHRMAP, this is due for completion late 2025.	Under review
	<p><a href="#">City of Kwinana Coastal Adaptation Plan (2016)</a></p> 	Cockburn Sound Coastal Alliance and the City of Kwinana	City of Kwinana coast	This plan has been prepared to adapt to the changing coast along the City of Kwinana, and provides recommended timeframes and trigger points for decision-making and planning for the Kwinana coast. The plan has been prepared as the first iteration of an evolving, long-term planning and decision-making process for the City of Kwinana, the community, and key stakeholders to adapt our settlements and infrastructure to coastal processes – including risks of coastal erosion and inundation.	Completed
	<p><a href="#">City of Fremantle South Fremantle Coast Coastal Adaptation Plan (2016)</a></p> 	Cockburn Sound Coastal Alliance and the City of Fremantle	South Mole to South Beach	This plan has been prepared to adapt to the changing coast south of the Swan River, and provides recommended timeframes and trigger points for decision-making and planning for the Fremantle coast from South Mole to South Beach. The adaptation plan includes an implementation stage that recommends specific coastal adaptation activities to be delivered in the immediate (15-year) planning horizon.	Completed
	<p><a href="#">Port, Leighton and Mosman Beaches Coastal Hazard Risk Management and Adaption Plan (2018)</a></p> 	GHD prepared for the City of Fremantle and Town of Mosman Park	Port, Leighton and Mosman beaches	The CHRMAP will inform coastal managers and decision makers of the types of coastal hazards and associated risks to assets and values, and the resultant vulnerabilities these risks have to the community and stakeholders, allowing informed decisions to be made about future coastal management and planning.	Completed
	<p><a href="#">Wanneroo Coastal Hazard Risk Management and Adaptation Plan (2018)</a></p> 	Cardno prepared for the City of Wanneroo	City of Wanneroo coast	The City of Wanneroo has prepared a CHRMAP for the City's coastline. Part 1 (hazard assessment) was completed in 2015, with Part 2 (risk assessment, analysis, and adaptation planning) finalised in 2018. The final CHRMAP resulted in 13 recommendations that will enable the City to make informed coastal management decisions in the future and how coastal hazards will be managed.	Completed
	<p><a href="#">City of Joondalup Coastal Hazard Risk Management and Adaptation Plan</a></p> 	City of Joondalup	City of Joondalup coast	The City of Joondalup is currently developing a CHRMAP for their coastline. The coastal hazards and potential adaptation options have been identified. The CHRMAP is due for community consultation and completion in 2023.	Underway

	<a href="#">City of Rockingham Coastal Hazard Risk Management and Adaptation Plan (2019)</a> 	City of Rockingham	Rockingham	The City of Rockingham has prepared a CHRMAP for their 37km of coastline. The CHRMAP outlines key directions for coastal adaptation over a 100-year planning timeframe and prioritises management works over the next 10 years.	Completed
	<a href="#">Town of Cambridge Coastal Hazard Risk Adaptation and Management Plan (2022)</a> 	Cardno for the Town of Cambridge	Town of Cambridge coast	The Town has prepared a CHRMAP to provide strategic guidance for coordinated, integrated and sustainable land use planning and management along its coastline. The CHRMAP will inform the Town's decision-making with respect to managing coastal areas and assets.	Completed
	<a href="#">City of Stirling Coastal Hazard Risk Management and Adaptation Plan (2023)</a> 	Cardno and Element for the City of Stirling	City of Stirling coast	The City has prepared a CHRMAP for its coastline which builds on previous work including a coastal erosion assessment and geophysical investigation. The CHRMAP will enable long-term management of areas that may be impacted by coastal hazards.	Completed
	<a href="#">Town of Cottesloe Coastal Hazard Risk Management and Adaptation Plan</a> 	Water Technology for the Town of Cottesloe	Town of Cottesloe coast	The Town of Cottesloe is currently preparing a CHRMAP to plan for coastal hazards which are likely to impact the Town's coastline. The CHRMAP will increase the understanding of the risks and will provide adaptation measures for implementation. The CHRMAP is due for completion in late 2023.	Underway
	<a href="#">Town of East Fremantle Coastal Hazard Risk Management and Adaptation Plan</a> 	Baird Australia for the Town of East Fremantle	Town of East Fremantle waterfront	The Town of East Fremantle is currently preparing a CHRMAP to identify coastal hazards and to provide a framework for adaptation that can guide decision making in the short to medium term (next 10-20 years) and provide management and adaptation strategies to mitigate hazard in future planning periods (next 100 years). The CHRMAP is due for completion in early 2024.	Underway
	<a href="#">City of Nedlands Coastal Hazard Risk Management and Adaptation Plan</a> 		The City of Nedlands coastline and estuary	The CHRMAP will enhance knowledge of coastal and estuarine processes and hazards within the City and offer practical adaptation procedures. The CHRMAP will provide a strategic direction for the City's coordinated, comprehensive and sustainable land use planning and management decisions. The CHRMAP is due for completion in late 2025.	Underway
Peel	<a href="#">City of Mandurah Northern Beaches Coastal Hazard Risk Management and Adaptation Plan (2022)</a> 	GHD for the City of Mandurah	Roberts Point to the northern boundary of Madora Bay	The CHRMAP was produced for the developed coastline of the City of Mandurah from Roberts Point to Madora Bay. The CHRMAP informs stakeholders and the community about: <ul style="list-style-type: none"> <li>• Potential risks arising from coastal hazards (e.g. erosion and inundation)</li> <li>• Key coastal infrastructure and assets at risk</li> <li>• Community and cultural values of the coastal zone</li> <li>• Adaptation pathways and management options that the City and other stakeholders can pursue to address the risks from coastal hazards over time.</li> </ul>	Completed
	<a href="#">Shire of Murray Coastal Hazard Risk Management and Adaptation Plan</a> 	Baird Australia for the Shire of Murray	Low-lying estuarine reaches of the Peel Harvey and the Murray and Serpentine Rivers	The CHRMAP will inform the community and decision makers about potential estuarine coast and riverine hazards (such as erosion and inundation), the risks and necessary actions. The CHRMAP will outline key directions for estuarine coast and riverine adaptation over a 100 year planning timeframe, while also prioritising management responses over the short to medium term. The CHRMAP is due for completion in early 2024.	Underway
	<a href="#">City of Mandurah Southern Beaches CHRMAP</a> 		An approximate 20km of coastline from Roberts Point at Halls Head to White Hills Beach in Bouvard	The CHRMAP will improve understanding of coastal processes and hazards within the Shire and provide suitable adaptation responses. The CHRMAP will provide strategic guidance for coordinated, integrated and sustainable land use planning and management decision making by the Shire. The CHRMAP is due for completion in late 2025.	Underway
South West	<a href="#">Shire of Augusta-Margaret River Coastal Hazard Risk Management and Adaptation Plan (2015)</a> 	Prepared by Shore Coastal for the Shire of Augusta-Margaret River	Shire of Augusta-Margaret River	The CHRMAP provides strategic guidance on management and adaptation in areas exposed to coastal processes within key settlements. These settlements include Gracetown, Prevelly, Gnarabup, Hamelin Bay, Molloy Island, Augusta North (Blackwood River) and Augusta South (Flinders Bay). The CHRMAP is currently being reviewed and is due for completion in early 2024.	Under review

	<p><a href="#">Shire of Harvey Coastal Hazard Risk Management and Adaptation Plan (2017)</a></p> 	Prepared by Damara WA Pty Ltd, Land Insights & Evaluate Environmental for the Shire of Harvey and Peron Naturaliste Partnership (PNP)	Shire of Harvey	The Coastal Hazard Risk Management and Adaptation Plan for the Shire of Harvey broadly establishes the context, undertake a coastal hazard risk identification, analysis and evaluation and develops coastal hazard risk treatment options. The PNP Coastal Adaptation Decision Pathways Project informed the Project.	Completed
	<p><a href="#">City of Busselton Coastal Hazard Risk Management and Adaptation Plan (2022)</a></p> 	Advisian for the City of Busselton	Busselton	The CHRMAP provides a long-term view of coastal hazards for the City, and recommends pathways to adapt to future oceanic and coastal conditions. The CHRMAP aims to ensure that the City is strategically well-placed to contend with those hazards as and when they arise.	Completed
	<p><a href="#">Koombana Bay Coastal Hazard Risk Management and Adaptation Plan (2019)</a></p> 	GHD for the Southwest Development Commission, City of Bunbury, Department of Transport, LandCorp and the Dolphin Discovery Centre	Koombana Bay	The CHRMAP identifies and considers coastal erosion and inundation hazards and risks for the project area (shorelines of southern and western Koombana Bay). This culminates in recommended adaptation pathways with actions to assist in adapting to immediate and short-term coastal erosion and inundation risks, and undertaking appropriate planning to address increasing risk over time.	Completed
	<p><a href="#">Capel - Leschenault Coastal Hazard Risk Management and Adaptation Plan</a></p> 	City of Bunbury, Shires of Capel, Dardanup and Harvey; Department of Biodiversity, Conservation and Attractions; and Southern Ports Authority	Forrest Beach to McKenna Point, Koombana Bay (inc. Inner Harbour to Cut), Leschenault Inlet/Estuary/Peninsula, Capel, Preston, Ferguson, Collie, Brunswick Rivers, Five Mile Brook Diversion, the Parkfield Drain and Millar's Creek	<p>The primary objective of the CHRMAP is to identify how the assets vulnerable to the adverse impacts of coastal erosion and inundation are to be managed with clear immediate, short, medium and long-term implementation actions based on time and or event-based triggers (including capital and recurrent costs).</p> <p>The development of the CHRMAP will involve the community to ensure they are aware of the issues and are involved in the decision-making for the coast. The CHRMAP is due for completion in late 2023.</p>	Underway
	<p><a href="#">Windy Harbour Coastal Hazard Risk Management and Adaptation Plan</a></p> 	Water Technology for the Shire of Manjimup	Windy Harbour	The Shire of Manjimup is currently preparing a CHRMAP which will set the framework for the assessment, by identifying coastal hazards, analysing vulnerability for specific assets, identifying and prioritising management and adaptation responses, and providing an implementation plan. Ultimately, the CHRMAP will provide strategic guidance for coordinated, integrated and sustainable land use planning and management decision-making by the Shire. The CHRMAP is due for completion in mid 2024.	Underway
Great Southern	<p><a href="#">Ocean Beach and Peaceful Bay Coastal Hazard Risk Management and Adaptation Plan (2018)</a></p> 	Seashore Engineering and Land Insights for the Shire of Denmark	Ocean Beach and Peaceful Bay	The Shire of Denmark has completed a CHRMAP and ten-year Concept Plan for the most highly valued sections of beach and foreshore at Ocean Beach and Peaceful Bay. The project identifies the vulnerability of these portions of coastline to coastal hazards in order to properly plan development and land use, with emphasis on the next ten years.	Completed
	<p><a href="#">Emu Point to Middleton Beach Coastal Hazard Risk Management and Adaptation Plan (2019)</a></p> 	Aurora Environmental, Evo Coast, Shape Urban and Jeremy Benn Pacific for the City of Albany	Emu Point to Middleton Beach	The City of Albany has completed a CHRMAP for Emu Point to Middleton Beach, which builds on previous community engagement and data collection. Council and the community will draw on this information to determine possible treatments and consider the implications, trade-offs, planning mechanisms and timeframes.	Completed
	<p><a href="#">Princess Royal Harbour Coastal Hazard Risk Management and Adaptation Plan</a></p> 	Water Technology, Cardno, Element for the City of Albany	Princess Royal Harbour	The City of Albany is currently preparing a CHRMAP for the Princess Royal Harbour to identify key assets along the coast and measures the City may take to preserve them against the impacts of coastal hazards. The CHRMAP is due for completion in early 2024.	Underway
Goldfields - Esperance	<p><a href="#">Esperance Coastal Hazard Adaptation Strategy (2016)</a></p> 	BMT JFA Consultants for the Shire of Esperance	Shire of Esperance	The Strategy contains adaptation measures derived from broad categories of potential adaptation options available for the management of risks from coastal hazards that the urban areas of Esperance will face over the medium to long term, and establish an implementation program for those adaptation measures.	Completed

	<p><a href="#">Hopetoun Coastal Hazard Risk Management and Adaptation Plan</a></p> 	<p>Water Technology for Shire of Ravensthorpe</p>	<p>Hopetoun</p>	<p>The Shire of Ravensthorpe is currently preparing a CHRMAP for Hopetoun to understand coastal hazards and the risks that may impact the coastline in the future and what the options are for managing those. The CHRMAP is due for completion in early 2024.</p>	<p>Underway</p>
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<sup>1</sup> It is important to note that neither the Department of Planning, Lands and Heritage (DPLH) or the Western Australian Planning Commission (WAPC) have made judgements as to the technical merit of the methodologies used in all of these studies and in no way endorses all of the projects or their findings. Some of these projects have received funding through the WAPC and DPLH has provided assistance and support through participation in project steering committees. Any representation, statement, opinion or advice expressed or implied in this table is made in good faith and on the basis that the Government, its employees and agents are not liable for any damage or loss whatsoever which may occur as a result of action taken or not taken, as the case may be, in respect of any representation, statement, opinion or advice referred to herein. Professional advice should be obtained before applying the information contained in this table to particular circumstances.