

Development of Coastal Hazard Risk Management and Adaptation Plan

AGREEMENT

The project will be delivered in accordance with City of Joondalup policies, procedures and standards. Signatures of the parties identified below shall acknowledge agreement to the Project Plan.

Environmental Development Coordinator
 Project Manager

[Click here to enter a date.](#)

 Date

**Manager Strategic and Organisational
Development**
 Project Sponsor

[Click here to enter a date.](#)

 Date

Version no.	Date	Author	Comments/Amendments
1	18/3/24	Environmental Development Coordinator	
2	18/4/24	Manager Strategic and Organisational Development	Revisions
3	8/5/24	Director Governance and Strategy	Revisions
4	9/7/24	Environmental Development Coordinator	Revisions in accordance with feedback from Elected Members at Strategy Session on 4 June 2024
5	10/7/25	Environmental Development Coordinator	Updated broken links in document
Template Owner	Coordinator Organisational Development	Approved by	Mgr Strategic & Organisational Development
		Date Reviewed	May 2013

INTRODUCTION

Project Background

The City of Joondalup (the City) covers an area of 99 km² and includes 17 km of coastline from Marmion in the south to Burns Beach in the north. The City's coastline is highly valued by the community and its visitors, and it supports a variety of land uses including recreation, conservation, residential and commercial. The coastline includes foreshore reserves with regionally significant vegetation and Bush Forever sites.

The City's coastal zone is already affected by coastal hazards, such as erosion, and it is anticipated that the effects of these hazards will increase into the future, due to climate change and sea level rise. A Coastal Hazard Assessment was completed in 2016 to determine the potential extent of coastal erosion and inundation hazards, across a 100-year planning timeframe. A risk and vulnerability assessment was then completed to highlight the most vulnerable areas and assets across the City's coastline, and outline a plan for these areas.

The City's coastline is highly valued by the City and its community for its natural assets including coastal dune areas, for the recreational opportunities it provides and as a tourism attraction. There are also significant infrastructure assets along the coast such as roads, car parks, dual use paths, playgrounds, park infrastructure and buildings that are either owned or managed by the City. Increasing erosion and potential sea level rise has the potential to impact on these natural and built assets and may alter the way these areas can be accessed and enjoyed.

The City's coastline also contains areas of existing and planned residential development, commercial development, and community owned buildings. Increasing erosion and potential sea level rise also has the potential to impact on these areas and infrastructure.

Current Priority Erosion Areas

The area around the Marmion Angling and Aquatic Club (MAAC) in Marmion has been identified as one of 55 erosion hotspot priority areas in Western Australia, by the Department of Planning, Lands and Heritage and the Department of Transport.

Mullaloo Surf Life Saving Club has also been included as a watchlist location in the assessment of coastal erosion hotspots in WA. Watchlist locations have some coastal assets but there are possible reasons why erosion may not affect the location, the assets susceptible to erosion hazard are deemed to be of low or moderate value or the existing management actions and plans reduce the overall hazard.

Pinnaroo Point in Hillarys has also been identified as an area susceptible to coastal erosion and has experienced substantial erosion to date.

Coastal Partnerships

WALGA CHRMAP Forum

The City participates in the Western Australian Local Government Association (WALGA) Local Government CHRMAP Forum which was formed to provide opportunities for officers working in Local Governments in the coastal zone to share information, challenges and experiences in relation to coastal hazard risk management adaptation planning and coastal adaptation in general. The Local Government CHRMAP Forum also collaborates on projects of common interest, policy submissions and other advocacy activities.

Northern Beaches Alliance

The Northern Beaches Alliance (NBA) is a partnership established between the City of Wanneroo, Shire of Gingin, City of Joondalup, City of Stirling, City of Nedlands and Town of Cambridge in 2023. The purpose of the NBA is to share coastal knowledge and information and enable collaboration on coastal management practices across northern coastal local governments. The NBA has resulted in improved knowledge sharing and collaboration on coastal monitoring activities and coastal data collection across the participating local governments.

Draft CHRMAP

The City is required to develop a draft Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) to provide a long-term framework for adapting to coastal hazards, in accordance with the requirements of [State Coastal Planning Policy No. 2.6](#). The draft CHRMAP is a strategic plan that will inform the City and the community about expected coastal hazards, such as erosion, over the next 100 years, and provides options and pathways to adapt to these hazards and changing conditions over time. The draft plan should be developed in a way that acknowledges the need to balance environmental, social and economic values to ensure the City's coastline is sustainable in the long term.

Development of the City's draft CHRMAP commenced in 2016 and has involved a number of coastal technical assessments and investigations including the following stages:

- 2016 – [Coastal Hazard Assessment](#) — The City conducted a Coastal Hazard Assessment to assess the coastal hazards and vulnerability for the City's shoreline over a 100 year timeframe.
- 2018 – [Community Coastal Values Survey](#) — Community coastal values were defined through a Community Coastal Values Survey.
- 2022 – [Technical Coastal Hazard Risk Management and Adaptation Plan](#) — The City engaged consultants, MP Rogers and Associates, to develop a technical plan for the City's coastline, which included identifying areas and assets at risk of coastal hazards over the 100-year planning timeframe, as well as analysing and proposing suitable adaptation options.
- 2023 – [Community-facing Coastal Hazard Risk Management and Adaptation Plan](#) — The City engaged consultants, Water Technology, to translate the technical plan into a community facing plan in order to provide a document that was simpler to understand and suitable for community consultation.

Council endorsed the draft Coastal Hazard Risk Management and Adaptation Plan to be released for community consultation at the 23 May 2023 Council meeting (CJ066-05/23 refers).

Community consultation on the draft Coastal Hazard Risk Management and Adaptation Plan was conducted in June and July 2023.

The draft CHRMAP community consultation outcomes were presented to Council at the December 2023 meeting (CJ264-12/23 refers) and Council resolved that the City would:

- Prepare a new draft CHRMAP in alignment with State Planning Policy 2.6 and relevant guidelines and that it would be developed by a multi-disciplinary team of suitably qualified persons.
- Develop a Community and Stakeholder Engagement Strategy whereby the community is regularly updated and consulted in the development of the draft CHRMAP.
- Prepare the new draft CHRMAP having regard to internationally recognised scientific evidence, further research and coastal monitoring, identification of alternative adaptation options, and the review of State Planning Policy 2.6.

- Establish a Community Reference Group to provide advice, guidance and oversight in the development of the draft CHRMAP.

PROJECT DESCRIPTION AND DELIVERABLES

Project Description and Scope

The aim of this project is to develop a City-wide CHRMAP to provide a long-term framework for adapting to coastal hazards, in accordance with the requirements of State Coastal Planning Policy 2.6, and the decision of the December 2023 Council meeting, to define areas of the coastline which could be vulnerable to coastal hazards and outline the preferred approach and pathways to manage these hazards.

The development of a draft CHRMAP will be undertaken from 2024/25 to 2026/27 and include the following:

- Establishment of a CHRMAP Community Reference Group to provide advice and input from the community and key stakeholders regarding the development of the draft CHRMAP.
- Establishment of a CHRMAP Technical Steering Group to provide guidance and oversight on all aspects of the draft CHRMAP process including City staff, Department of Planning, Lands and Heritage, Department of Transport and Western Australian Local Government Association, in accordance with the Department of Planning, Lands and Heritage and Western Australian Planning Commission [CHRMAP Guidelines](#).
- Conducting research regarding alternative adaptation options and internationally recognised scientific evidence.
- Development and implementation of a Community and Stakeholder Engagement Strategy to inform the community on the progress of the project and how they can be involved.
- Development and implementation of a Community Consultation Plan to guide activities to seek feedback and input from the community.
- Updating of the City's Coastal Hazard Assessment in accordance with the review of State Planning Policy No. 2.6.
- Develop draft CHRMAP to provide a long-term framework for adapting to coastal hazards in accordance with updated State Planning Policy 2.6, Coastal Hazard Assessment, research findings and input from CHRMAP Community Reference Group.

Project Objectives and Deliverables

Objective	Deliverables	Benefits
Engage the community and relevant stakeholders throughout the development of the CHRMAP	<ul style="list-style-type: none"> Establishment of CHRMAP Community Reference Group Establishment of CHRMAP Technical Steering Group Community and Stakeholder Engagement Strategy Community Consultation Plan 	Community and stakeholder input into development of draft CHRMAP
Identify alternative adaptation options for coastal protection	Research regarding alternative adaptation options for coastal protection.	Research findings will be used to inform the development of the draft CHRMAP and proposed adaptation options and pathways.
Identification of coastal hazards and risks for the City's coastal zones.	Updated Coastal Hazard Assessment in accordance with review of State Planning Policy No. 2.6	Coastal Hazard Assessment aligned with review of State Planning Policy No. 2.6 Outcomes of hazard assessment inform the development of the draft CHRMAP.
Coastal hazards are addressed through a long-term plan.	Development of draft CHRMAP to provide long-term framework for adapting to coastal hazards	City-wide CHRMAP developed to address coastal hazards with management actions/recommendations.

Links to Strategic Plans

The development of a CHRMAP aligns with the following outcomes from the Strategic Community Plan 2022 - 2032:

- 2-1 Managed and protected – you value and enjoy the biodiversity in local bushland, wetland and coastal areas
- 2-4 Resilient and prepared – you understand and are prepared for the impacts of climate change and natural disasters.

The development of a CHRMAP also aligns with the Coastal Infrastructure Adaptation Plan 2018 - 2026 and the management action to develop a CHRMAP for the City's entire coastline including community engagement. The development of a CHRMAP also aligns with the City's draft Environment Strategy.

PROJECT SCHEDULE

Key Milestones

Stage	Task	By Whom	By When
Phase 1			
1.	Present CHRMAP Project Plan to Elected Members seeking feedback. Present CHRMAP Community Reference Group draft Terms of Reference to Elected Members for feedback.	Manager Strategic and Organisational Development	Q4 2023/24
2.	Present CHRMAP Project Plan to Council seeking endorsement. Present CHRMAP Community Reference Group draft Terms of Reference to Council seeking endorsement.	Manager Strategic and Organisational Development	Q1 2024/25
3.	Recruitment of Coastal Hazard Planning Officer.	Environmental Development Coordinator	Q2 2024/25
4.	Engage facilitator to coordinate CHRMAP Community Reference Group and provide input into Community and Stakeholder Engagement Strategy through RFQ process.	Coastal Hazard Planning Officer	Q2 2024/25
Phase 2			
5.	Advertise CHRMAP Community Reference Group membership to the community.	Coastal Hazard Planning Officer	Q3 2024/25
6.	Establish CHRMAP Technical Steering Group with involvement from key stakeholders.	Coastal Hazard Planning Officer	Q3 2024/25
7.	Seek Council endorsement of CHRMAP Community Reference Group membership. Establish CHRMAP Community Reference Group.	Manager Strategic and Organisational Development	Q4 2024/25
8.	Engage consultants or research institution to undertake research regarding alternative adaptation options for coastal protection.	Coastal Hazard Planning Officer	Q4 2024/25
9.	Develop draft Community and Stakeholder Engagement Strategy.	Coastal Hazard Planning Officer / consultant	Q4 2024/25
10.	Seek feedback from CHRMAP Community Reference Group and CHRMAP Technical Steering Group on draft Community and Stakeholder Engagement Strategy.	Coastal Hazard Planning Officer / consultant	Q1 2025/26

Stage	Task	By Whom	By When
11.	Seek feedback from Elected Members on draft Community and Stakeholder Engagement Strategy. Seek Council endorsement of Community and Stakeholder Engagement Strategy.	Manager Strategic and Organisational Development	Q1 2025/26
Phase 3*			
12.	Once State Planning Policy 2.6 has been reviewed, engage consultant to undertake Coastal Hazard Assessment.	Coastal Hazard Planning Officer	2025/26
13.	Engage consultants to update draft CHRMAP to provide long-term framework for adapting to coastal hazards using updated State Planning Policy 2.6, Coastal Hazard Assessment, research findings and input from CHRMAP Community Reference Group and CHRMAP Technical Steering Group.	Coastal Hazard Planning Officer	2025/26
14.	Seek feedback from Elected Members on draft CHRMAP.	Coastal Hazard Planning Officer	2026/27
15.	Present draft CHRMAP to Council seeking endorsement to conduct community consultation.	Coastal Hazard Planning Officer	2026/27
16.	Conduct community consultation on draft CHRMAP.	Coastal Hazard Planning Officer	2026/27
17.	Present final CHRMAP to Council for endorsement.	Coastal Hazard Planning Officer	2026/27

* The timeframes for Phase 3 are subject to the completion of the review of State Planning Policy 2.6.

Note: Key milestones in the project schedule will be included in the Corporate Business Plan for the relevant quarters and years.

BUDGET

The following estimated budget items are associated with the development of the draft CHRMAP.

Budget Items	\$Amount
Coastal Hazard Planning Officer position	\$120,000 (TEC) annually (2024/25 – 2026/27) \$360,000 total for 3 years
Consultant to conduct research regarding alternative adaptation options and internationally recognised scientific evidence	\$30,000 (2024/25)
Facilitator for CHRMAP Community Reference Group	\$30,000 per year (2024/25 – 2026/27) \$90,000 total for 3 years
Consultant to undertake Coastal Hazard Assessment*	\$30,000 (2025/26)
Consultant for development of CHRMAP	\$110,000 (2024/25 and 2025/26) \$220,000 total for 2 years
TOTAL	\$730,000

* The City has applied for 50% funding through the Disaster Ready Fund for the Coastal Hazard Assessment and will also consider applying for funding through a CoastWA grant.

PROJECT MANAGEMENT

Project Management Structure



Project Sponsor – Responsibilities

The Project Sponsor has overall accountability for the project, including:

- Providing guidance to the project manager
- Playing a significant role in the development of the initial scope and approach to delivering the project
- Making decisions relating to the project
- Providing approvals, eg, project plan and variations, budget funds etc
- Monitoring progress and approving status reports
- Approving communication about the project and providing status reports to the CEO, Elected Members or relevant groups
- Closing down the project following completion

Project Manager – Responsibilities

The Project Manager is in charge of all aspects of the project delivery, including:

- Developing the project plan, negotiating for resources and appointing the project team
- Providing direction to the project team, coordinating project tasks and monitoring the quality of deliverables
- Keeping the project on schedule and budget
- Managing issues and risks
- Ensuring good communication through meetings and sharing of information
- Providing status reports to the project sponsor
- Communicating with stakeholders, where necessary
- Approving all tasks in each phase of the project
- Closing down the project following completion

Project Team Responsibilities

The Project Team may comprise representatives from several business units. The Project Team role includes:

- Providing advice on the processes to be undertaken
- Attending meetings
- Ensuring project tasks allocated are undertaken in line with the project schedule and budget
- Providing technical expertise, sharing ideas and reporting issues to the project manager
- Updating their respective business units to keep all staff informed of progress

PROJECT CONTROL

Progress Reporting

The Project Plan will be controlled by the completion of Monthly Project Status Reports. Key elements include:

- Monitoring and measuring performance against the project plan;
- Reporting deviations from project plans and issues arising; and
- Documenting corrective action taken.

A Project Completion Report is required on completion of the project to indicate achievement of project deliverables, to review the planning and delivery of the project, and to make recommendations for future projects.

Change Management

The following process will apply for any proposed changes to the project in terms of scope, schedule, price and quality:

- Proposed changes will be evaluated for impact on project processes and outcomes after other reasonable alternatives have been explored;
- Proposed changes will be formally recorded on a Project Change Request Form and submitted to the Project Sponsor;
- The Project Sponsor will review the proposals and either accept or reject them;
- The changes will need final authorisation by the CEO, if the CEO is not the Project Sponsor; and
- Accepted changes will be communicated to key stakeholders and the associated project documentation will be amended.

STAKEHOLDER ENGAGEMENT STRATEGY

Stakeholder	Information to be communicated	Frequency/Timing	Medium	Responsible Officer
Council	Informed about the City's progress towards development of draft CHRMAP and outcomes from community and stakeholder engagement activities.	As required	Desk of the CEO and Council Reports	Coastal Hazard Planning Officer
	Informed about the outcomes of the CHRMAP and community and stakeholder engagement.	As required	Strategy Session	Project Sponsor
CEO	Informed about the City's progress towards development of draft CHRMAP and outcomes from community and stakeholder engagement activities.	As required	Report to ELT	Project Manager
	Review of the draft CHRMAP.	As required	Report to ELT	Project Manager
Project Sponsor	Progress in the implementation of the Project.	As required	Meetings	Coastal Hazard Planning Officer
Project Group	Progress in the implementation of the Project.	As required	Meetings	Coastal Hazard Planning Officer
Project Manager	Progress in the implementation of the Project.	As required	Meetings	Coastal Hazard Planning Officer
CHRMAP Community Reference Group	Informed about the City's progress towards development of draft CHRMAP and outcomes from stakeholder engagement activities.	Up to 4 times a year for 3 years	Meetings	Coastal Hazard Planning Officer
CHRMAP Technical Steering Group	Informed about the City's progress towards development of draft CHRMAP and outcomes from community engagement activities.	Up to 4 times a year for 3 years	Meetings	Coastal Hazard Planning Officer
Community, Residents, Sports and Friends Groups	Engaged through CHRMAP Community Reference Group, regular CHRMAP progress updates and outcomes from community consultation activities.	As required	CHRMAP Community Reference Group, social media, emails, website	Coastal Hazard Planning Officer
City Staff	Informed about the City's development of draft CHRMAP and upcoming community engagement activities.	As required	Intranet	Coastal Hazard Planning Officer

CONSULTATION

External communications and consultations will be guided by the City's Community Consultation Council [Policy](#) and the Department of Planning, Lands and Heritage and Western Australian Planning Commission CHRMAP [Guidelines](#).

Once this Project Plan is endorsed by Council, the City will develop a formal Community Consultation Plan (as per the City's Community Consultation Council Policy).

RISK ASSESSMENT

	Consequences (C)				
Likelihood (L)	Insignificant (1)	Minor (2)	Medium (3)	Major (4)	Catastrophic (5)
Almost Certain (5)	5	10	15	20	25
Likely (4)	4	8	12	16	20
Possible (3)	3	6	9	12	15
Unlikely (2)	2	4	6	8	10
Rare (1)	1	2	3	4	5

Overall Risk Score = L x C	
Score	Description
1 – 5	Low
6 – 12	Moderate
13 – 19	High
20 - 25	Extreme

Risk Description	Likelihood of Occurrence	Consequences of Occurrence	Overall Risk Level	Current Controls in Place	Further Action Required (Responsibility and Timing)
Unable to complete project within designated timeframe	Possible	Minor	Moderate	Project plan	Monthly reporting through Business Unit monthly report and quarterly reporting through Corporate Business Plan.
The City does not have the necessary skills inhouse to complete Project.	Possible	Medium	Moderate	Utilising external consultants for technical components	Use a project team approach to utilise skills from across the organisation.
The community is unhappy with the City's proposed coastal adaptation approach.	Possible	Minor	Moderate	CHRMAP Community Reference Group and regular communications with community and stakeholders	Use technical consultants to explain reasoning behind approach.
The community is unhappy about the coastal adaptation options identified.	Possible	Minor	Moderate	CHRMAP Community Reference Group and regular communications with community and stakeholders	Use technical consultants to research alternative adaptation options.