

Our Resilient Coast.
Our Future.

Sunshine Coast Coastal Hazard Adaptation Strategy

Part C: Five-Year Implementation Plan

May 2021

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Acknowledgements

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Cover photo:

Kings Beach Fragments | Noel Brady

Inside cover photo:

Cotton Tree Christmas-Day | John Anderson

Cotton Tree (Image: John Anderson)

Acknowledgement of Country

Sunshine Coast Regional Council acknowledges the traditional Country of the Kabi Kabi Peoples and the Jinibara Peoples of the coastal plains and hinterlands of the Sunshine Coast and recognise that these have always been places of cultural, spiritual, social and economic significance. We wish to pay respect to their Elders – past, present and emerging – and acknowledge the important role Aboriginal and Torres Strait Islander people continue to play within the Sunshine Coast community. Council is committed to ongoing communications and consultation with the Traditional Owners and the broader Aboriginal and Torres Strait Islander community of the Sunshine Coast in the implementation of the Strategy.

This document forms part of the Coastal Hazard Adaptation Strategy (CHAS).

The CHAS provides a proactive plan for the future management of our coastal areas, to increase the resilience of our region.

The Coastal Hazard Adaptation Strategy is a risk and change management initiative to better prepare Council and the community to proactively respond to coastal hazards. This includes to mitigate and adapt to the

social, cultural, economic, and environmental risks associated with current and future coastal hazards.

To effect change and ensure we achieve this vision requires much more than policy and planning. The strategy needs action and commitment and a clear and concise implementation plan to embed the Region-wide actions and locality specific adaptation pathways into Sunshine Coast Council's business and to influence the operations of key stakeholders and partners.

The Five-Year Implementation Plan

Part C, the Five-Year Implementation Plan, provides a framework and integrated approach to the delivery of the suite of region-wide and local adaptation actions.

This implementation plan will be updated annually to retain its relevance and maintain a current five-year implementation horizon.

Key elements of the implementation plan are:

1. Themes
2. Strategic Actions
3. Tasks
4. Timeframes
5. Cost estimates

Themes

There are four themes of adaptation options.

1. Enhancing adaptive capacity
2. Planning
3. Modifying infrastructure
4. Coastal management and engineering.

This provides alignment with the Themes identified in Table 9 of Section 4 of Part A.

Strategic Actions

The Strategic Actions relate to the adaptation options that are to be implemented in order to prevent or reduce adverse impacts associated with coastal hazards.

The CHAS identifies a range of Strategic Actions for implementation at:

- the LGA-wide scale (outlined in Section 5 of Part A); and
- the locality scale as part of the adaptation response pathway (outlined in Section 6 of Part A).

Tasks

The Tasks are the region-wide and local adaptation actions that are a priority for implementation / completion within the next 5 years.

Timeframes

This Implementation Plan sets out a five-year timeframe for delivering tasks. This indicates the commencement year and the estimated duration of the task.

Cost estimates

The cost associated with delivery of tasks is indicative only. Funding of actions and tasks are subject to council's capital works and operational annual budgetary considerations.

L = Low cost is \$0–\$100,000

M = Medium cost is \$101,000–\$500,000

H = High cost is \$501,000+

Guiding Principles

Responding to climate change and increased risks associated with physical exposure to sea level rise, coastal erosion, and storm surge will be essential if we are to minimise potential impacts on the health of our environment, our regional economy, the lifestyles we lead, and the resilience of our community.

Responding to this challenge will be complex and demands considered and responsive research, policy development, planning and decision-making to ensure that delivery of the Strategy is effective, relevant and robust. Our approach will also need to be forward-looking, flexible and innovative.

To assist with the delivery of the five year implementation plan, a strong set of guiding principles has been included.

These principles are consistent with those developed for the implementation of the Environment and Liveability Strategy. They are intended to be used to inform our behaviours, the decisions we make, and how Council and its partners will work together to deliver the tasks identified in the Five Year Implementation Plan.



Lead

Leading by example, we engage our community, we listen, make the difficult decisions and inspire and enable community empowerment.



Balance

Balancing the environmental, social, and economic needs of today, without compromising the ability to meet the needs of future generations.



Connect

Connecting, partnering and integrating, we draw on the collective skills, knowledge and strength of our region.



Embrace

Embracing change, we boldly respond to the challenges ahead, actively seeking new ideas and opportunities.



Adapt

Adapting to change, we make proactive, evidence-based and responsive decisions in a timely manner, informed by changing environmental conditions and community needs.



Create

Creating productive partnerships and alliances, we explore and trial innovative approaches and new technologies.

Theme 1 – Enhancing Adaptive Capacity		2021/22	Indicative outer years					Five-year cost estimates Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
			2022/23	2023/24	2024/25	2025/26		
Strategic Action	Tasks							
1.1 Community stewardship program Develop programs and partnerships to enhance stewardship of the coastal zone and community adaptive capacity	1.1.1 Establish CHAS program officer role to support implementation.	●	●	●	●	●	Medium	
	1.1.2 Enhance existing engagement programs to maximise community capacity and involvement in dune protection and maintenance activities through partnerships, volunteering and citizen science initiatives.	●	●	●	●	●	Low	
	1.1.3 Undertake a regional assessment to identify social and financial vulnerabilities and inform adaptation pathways regarding support required to effectively adapt to changing coastal hazard risks.			●	●	●	Medium	
	1.1.4 Review infrastructure and technology needs to reduce impacts on communities from access disruption linked to inundation events.				●	●	Low	
	1.1.5 Continue to support and prepare local businesses to respond to emergencies and build longer term resilience.	●	●	●	●	●	Low	
	1.1.6 Develop programs and initiatives to continue to increase the Sunshine Coast's social and economic diversity to reduce reliance on coastal dependant activities and increase regional resilience.	●	●	●	●	●	Low	
1.2 Knowledge sharing Facilitate knowledge sharing and education on hazards and adaptation	1.2.1 Continue to partner with First Nation representatives to understand their needs, aspirations and involvement in coastal hazard adaptation, including the identification of cultural values, management of significant sites, supporting their ongoing role in caring for country and informing future adaptation approaches.	●	●	●	●	●	Low	
	1.2.2 Develop coastal management communication and engagement plan and associated materials.	●	●	●	●	●	Low	
	1.2.3 Facilitate coastal management training/ education workshops and events for knowledge sharing with internal and external stakeholders.	●	●	●	●	●	Low	
	1.2.4 Formalise and coordinate information sharing and accessibility to relevant hazard exposure data within Council and between Council and state agencies.	●	●	●	●	●	Low	

Theme 1 – Enhancing Adaptive Capacity		Indicative outer years					Five-year cost estimates Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
		2021/22	2022/23	2023/24	2024/25	2025/26	
Strategic Action	Tasks						
1.3 Monitoring Monitor changes in coastal hazard risk and effectiveness of adaptation	1.3.1 Develop an integrated coastal data platform and process to inform adaptive management.	●	●	●	●	●	Medium
	1.3.2 Develop and integrate CHAS implementation evaluation metrics into existing monitoring programs to measure effectiveness.	●	●	●	●	●	Low
	1.3.3 Prepare an annual report on CHAS implementation, including evaluation metrics.	●	●	●	●	●	Low
	1.3.4 Investigate options to support community reporting of coastal hazard impacts to inform future adaptation options and decisions.				●	●	Low
1.4 Research partnerships and focus topics Boost research partnerships and undertake additional investigations to support adaptation	1.4.1 Establish collaborative partnerships with key universities and research centres and define key research projects to support implementation.	●	●	●	●	●	Low
	1.4.2 Investigate the impact of coastal hazards on natural assets, their ecosystem services and associated economic values to inform future decision making.			●	●	●	Low
	1.4.3 Determine ecosystem needs for maintaining thriving estuaries with due regard to climate change and impacts from other growth related drivers.			●	●	●	Medium
1.5 Funding	1.5.1 Seek and apply for funding to establish programs, partnerships and collaboration that supports implementation of the Strategy, including initiatives that support innovation in adaptation.	●	●	●	●	●	Low

Theme 2 – Planning		2021/22	Indicative outer years				Five-year cost estimates
Strategic Action	Tasks		2022/23	2023/24	2024/25	2025/26	Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
2.1 Land use planning Use the outcomes of the CHAS to inform statutory planning and other non-statutory strategy and planning processes	2.1.1 Use the Strategy (including coastal hazard mapping and emerging risk information) to inform all relevant corporate and operational policy and planning matters across Council, including the development of the new planning scheme.	●	●	●	●	●	Low
	2.1.2 Use the updated Erosion Prone Area and storm tide inundation mapping to inform the preparation of a new coastal hazard protection overlay for the new planning scheme.	●	●	●			Low
	2.1.3 Review future development and infrastructure servicing options for rural areas subject to 2100 HAT.	●	●	●			Low
	2.1.4 Investigate the implications of the revised Erosion Prone Area (for existing and future developed areas).	●	●	●	●	●	Low
	2.1.5 Advocate to the State Government to review current State planning provisions and land tenure arrangements relevant to coastal hazard adaptation.	●	●	●	●	●	Low
	2.1.6 Develop a Blue Heart Sunshine Coast land use transition plan.	●	●	●	●	●	Medium
	2.1.7 Undertake prioritised special area adaptation planning and determine triggers for relocation of specific foreshore assets or transition planning (as specified in locality pathways).	●	●	●	●	●	Medium
	2.1.8 Review Surf Life Saving infrastructure and associated services across the coast and develop a plan to inform a coordinated approach to long-term infrastructure siting, design, and service delivery and special area adaptation planning at priority locations.	●	●	●	●	●	Medium

Theme 2 – Planning		2021/22	Indicative outer years				Five-year cost estimates
			2022/23	2023/24	2024/25	2025/26	Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
Strategic Action	Tasks						
2.2 Disaster management Update emergency response planning	2.2.1 Update disaster management plans using new Erosion Prone Area and storm tide inundation mapping, the CHAS risk assessment, and information on economic implications.	●	●	●	●	●	Low
	2.2.2 Update disaster management and recovery planning based on a better understanding of social vulnerability associated with coastal hazards.			●	●	●	Medium
	2.2.3 Review the long-term adequacy of evacuation facilities and evacuation routes for different coastal hazard adaptation planning horizons.	●	●	●	●	●	Low
2.3 Other location specific planning including coastal pathway	2.3.1 Review planning provisions to enable an option for long-term raising of lot levels in inundation prone coastal urban areas and supplementary drainage options for areas identified in location specific adaptation pathways.	●	●	●	●	●	Low
	2.3.2 Review planning provisions for land uses located in open coast erosion prone areas identified in location specific adaptation pathways.	●	●	●	●	●	Low
	2.3.3 Undertake other actions for areas identified in location specific adaptation pathways.	●	●	●	●	●	Low
	2.3.4 Review coastal pathway and ensure alignment is situated as landward as possible and designed and constructed appropriately if sited in a hazard prone area.	●	●	●	●	●	Medium

Theme 3 – Modifying Infrastructure		2021/22	Indicative outer years				Five-year cost estimates Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
			2022/23	2023/24	2024/25	2025/26	
Strategic Action	Tasks						
3.1 Build resilience Upgrading and renewing infrastructure	3.1.1 Embed coastal hazard risk information (across all planning horizons) into asset planning and management to identify Council assets at risk and to inform appropriate maintenance requirements, renewal timeframes, potential relocation and future design considerations.	●	●	●	●	●	Medium
	3.1.2 Use the Strategy to inform the development and implementation of the State's Sunshine Coast Infrastructure Plan to deliver co-ordinated planning of future climate resilient infrastructure in partnership with the State Government and utility providers.	●	●	●	●	●	Low
	3.1.3 Relocate specific assets where defined in adaptation pathways as part of asset renewal process.	●	●	●	●	●	Low
	Resilient homes	3.1.4 Promote resilient homes within the community and building sector for identified areas in location specific adaptation pathways.			●	●	●
4.1 Dune protection, enhancement, and maintenance Minimise dune disturbance, maintain vegetation, enhance dune systems	4.1.1 Undertake dune protection, enhancement, and management in areas identified in location specific adaptation pathways.	●	●	●	●	●	Medium
	4.1.2 Implement education and awareness, stewardship support, and compliance programs as part of the dune protection, enhancement and management program.	●	●	●	●	●	Low

Theme 4 – Coastal Management and Engineering		2021/22	Indicative outer years				Five-year cost estimates
			2022/23	2023/24	2024/25	2025/26	Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
Strategic Action	Tasks						
4.2 Open coast erosion mitigation works Open coast erosion mitigation options	4.2.1 Develop and implement updated shoreline erosion management planning that incorporates location specific actions (including supporting Cost Benefit Analysis for priority sites), as a key component of integrated coastal management.		●	●	●	●	Medium
	4.2.2 Investigate mechanisms for landowner funding of coastal protection works that benefit their assets.	●	●	●	●	●	Medium
	4.2.3 Define Council's role regarding co-ordination, planning and delivery of mitigation works for private properties – linked to location specific pathways.	●	●	●	●	●	Low
	4.2.4 Undertake feasibility studies for alternative solutions as it relates to open coast erosion identified in adaptation pathways, including artificial offshore reefs.	●	●	●	●	●	Medium
	4.2.5 Deliver shoreline erosion management activities in line with location specific adaptation pathways and associated planning.	●	●	●	●	●	High
	4.2.6 Undertake a trial/case study at Watson Street, Currimundi to develop a framework for a coordinated, joint approach for the mitigation of erosion risk for private assets in the present-day hazard area.	●	●	●	●	●	Medium
4.3 Protection from tidal and storm tide inundation Structures to minimise inundation	4.3.1 Undertake stormwater and drainage investigations, planning and design upgrades at identified areas in location specific pathways and incorporate into shoreline erosion management planning.	●	●	●	●	●	Medium
	4.3.2 Review and inform future updates of the Stormwater Drainage Strategy/ Master Drainage Planning Studies and embed infrastructure upgrades in asset management/capital works programming (including tailored CBA).	●	●	●	●	●	Medium

Theme 4 – Coastal Management and Engineering		2021/22	Indicative outer years				Five-year cost estimates
			2022/23	2023/24	2024/25	2025/26	Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
Strategic Action	Tasks						
4.4 Additional technical investigations required to inform long-term coastal zone adaptive management and inform CHAS and SEMP implementation LGA wide assessments	4.4.1 Undertake investigations to support implementation of a regional scale sand sourcing and nourishment program for areas identified in location specific pathways.				●	●	Medium
	4.4.2 Develop regional scale sediment transport model.			●	●	●	Medium
	4.4.3 Determine management required to maintain important sea turtle nesting sites, particularly with regard to sand nourishment impacts and incorporate into future updates of the Turtle Conservation Plan.			●	●	●	Low
	4.4.4 Investigate flooding solutions and concept options at priority areas to inform adaptation pathway planning at relevant locations.	●	●	●	●	●	Medium
	4.4.5 Develop regional scale Surf Management Plan to inform implementation of a regional scale sand sourcing and nourishment program.	●	●	●	●	●	Medium
	4.4.6 Undertake rocky headland stability investigation (geotechnical study and management implications) at identified areas in the location specific pathways.				●	●	Medium
	4.4.7 Update the Intermittent Open and Closed Lakes and Lagoons (ICOLL) management strategy.			●	●	●	Medium
	4.4.8 Undertake canal estates and constructed waterbodies waterfront levels of service assessment (including walkable waterfronts) to determine agreed levels of service and implications for asset design, management and flood impacts for areas identified in location specific pathways.				●	●	Medium

Theme 4 – Coastal Management and Engineering		2021/22	Indicative outer years				Five-year cost estimates
Strategic Action	Tasks		2022/23	2023/24	2024/25	2025/26	Low (\$0–\$100k) Medium (\$100k–\$500k) High (\$501k+)
4.4 Additional technical investigations required to inform long-term coastal zone adaptive management and inform CHAS and SEMP implementation LGA wide assessments	4.4.9 Undertake investigation on canal estate requirements for climate change adaptation including stability and design requirements for revetment walls.				●	●	Medium
	4.4.10 Undertake a feasibility study of mechanised stormwater drainage solutions as an interim strategy in support of urban transformation and growth within the context of longer-term adaptation pathways.		●	●	●		Medium
	4.4.11 Develop region wide approach and guidance for integrating stormwater drainage and outfall upgrades into concept design upgrades of future coastal protection works in priority urban coastal areas.					●	Low





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The QCoast2100 program provides the funding, tools and technical support to enable Queensland coastal local governments to create plans and strategies to address climate change related coastal hazard risk over the medium to long term.

