

### Management and Planning

#### 1 Establish a CMP Governance Framework

- Establish a CMP working group, to oversee the implementation of the CMP and ensure that it meets its objectives
- Members should include staff from Council, relevant stage government agencies, and other groups
- Clearly define its purpose, objectives and functions
- Define its roles and responsibilities of its members
- Execute the function of the working group



#### 4 Review Councils coastal management planning policies every 10 years

Review Councils coastal management planning policies for the 10 year CMP implementation lifecycle. This should include consideration of the latest environmental data, observed coastal hazard impacts, and state government policies. The review should consider:

- The Shoalhaven City Council Sea Level Rise Framework
- The Shoalhaven City Council Coastal Hazard Mapping
- Councils various planning instruments



#### 2 Maintain a full-time CMP Coordinator

Maintain a full-time Coastal Management Program Coordinator role - in order to coordinate the development and execution of Councils suite of CMPs, develop the implementation strategy (including long-term funding options) and build Council's capacity to respond to coastal issues and risks.



#### 5 Maintain planning controls to reduce future coastal hazard impacts

Implement & maintain planning controls in the Shoalhaven Local Environmental Plan 2014 and Shoalhaven Development Control Plan 2014 G6 Coastal Management Areas, which require specific information and assessment for proposed development in coastal hazard areas.

Update and maintain notation to section 10.7 (5) certificates for properties affected by coastal hazards consistent with NSW Government legislation.



#### 3 Enact the CMPs Monitoring, Evaluation and Reporting (MER) Program to track progress and report on outcomes

This will include:

- Ongoing monitoring of CMP actions
- Annual review of actions to ensure they are appropriate and current
- Ongoing reporting of progress

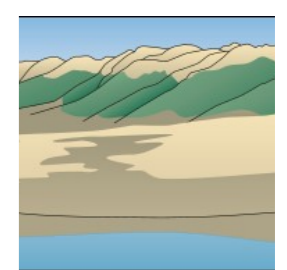


#### 6 Maintain appropriate land zoning in the to protect coastal dune systems

Maintain appropriate zoning in the Shoalhaven Local Environmental Plan 2014 to protect coastal dune systems and enhance resilience to coastal hazards.

Wherever possible, use zoning and planning controls to maintain open spaces where coastal dunes and associated habitats can roll landward in response to climate change and sea level rise.

On the open coast, this management action is linked to planning for vegetated foreshore reserves on coastal dunes.





### Community Engagement

#### 7 Develop and maintain a program of community engagement with coastal communities about coastal hazard risk

Engage with foreshore reserve property owners, residents, beach goers, and community youth around issues such as:

- Recognising Aboriginal cultural heritage on the coast
- The importance and value of dune vegetation (e.g. trapping wind-blown sand and maintaining dune resilience, ecological functions and buffering against coastal hazards)
- Managing the interface between coastal bushland and private property, including edge impacts, encroachments, garden refuse dumping, vegetation retention, and weed management
- Illegal pruning, poisoning and removal of trees, private vehicle access and illegal structures/items which restrict public use of the reserve. Enforce regulations in high conservation value areas as a priority



#### 8 Develop and maintain a program of community engagement with coastal communities about the geotechnical hazard risk

Prepare information for landholders living adjacent to geotechnical hazards and how they can contribute to risk reduction through:

- Maintaining an adequate surface drainage path into and out of the property
- Draining piped storm water away from steep slopes to avoid saturation and scouring
- Maintaining vegetation cover of appropriate species
- Repairing leaking or broken underground drainage or sewer pipes as soon as faults are identified
- Periodically inspecting the property to observe changes



#### 9 Develop and execute a communications plan for Stage 5 of the CMP

Present information on Council's website and in community engagement activities that shows:

- The status of CMP Actions
- How coastal zone systems function and how integrated management responses benefits local communities.





### Monitor and Manage the Coastal Environment

#### 10 Develop a program to monitor key environmental parameters

This would comprise an ongoing coastal monitoring program to collect important information about the state of our beaches. It would include:



- Periodic beach & dune surveys and shoreline monitoring
- Monitoring of the impacts of storm events (including photologs) and coastal erosion and inundation
- Monitoring of dune vegetation condition and weeds / invasive species
- Strategic linkages to other monitoring tools and programs, such as Beachwatch, BeachStat, and CoastSnap

#### 11 Install and maintain a series of CoastSnap camera cradles at key beaches

CoastSnap is a global citizen science project to capture our changing coastlines. It allows citizens to capture and upload photos of their beaches in order to improve our scientific understanding of erosion and coastal shoreline change.



CoastSnap camera cradles are already installed (or are about to be installed) at Currarong, Callala Bay, Narrawallee, and Mollymook.

This action would include ongoing funding for maintaining the camera cradles, analysing the collected photos, and potentially identifying and installing cradles at new locations.

More information about CoastSnap can be found here:

<https://www.coastsnap.com/>

#### 12 Continue Councils program of mapping endangered ecological communities (EECs) across coastal reserves

Carry out surveys to ground-truth and map the distribution and condition of EECs in coastal erosion risk areas using the Biodiversity Conservation Act, Biodiversity Assessment Methodology.



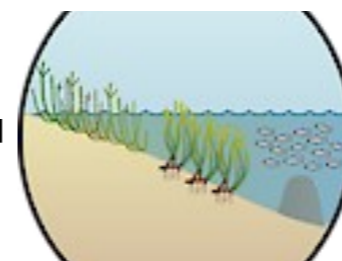
#### 13 Work with local surf life saving clubs to develop local dune vegetation management plans

This would involve developing local dune vegetation management plans for the coastal dunes in front of all SLSC buildings and lifeguard towers on patrolled beaches.

The goal would be to maintain sight lines for surf patrols (to maintain public safety), whilst also maintaining appropriate coverage of dune vegetation to promote dune stability and increase resilience to coastal erosion.

#### 14 Maintain and enhance ecological communities in coastal reserves

This action includes the ongoing implementation of ecological restoration works in coastal reserves. Prioritisation will be given to areas that house endangered ecological communities (EECs), and targeted weed species control works.



#### 15 Continue to work collaboratively with National Parks and Wildlife Service staff and volunteers to implement the NSW South Coast Shorebird Recovery Program

Continue to work collaboratively with National Parks and Wildlife Service staff and volunteers to implement the NSW South Coast Shorebird Recovery Program to:

- Raise awareness amongst residents and visitors of migratory shorebirds which are protected under international agreements, and federal and state legislation
- Manage the impacts of vehicles, pest animals, and dogs on beaches, especially in regard to the breeding success of migratory shorebirds





## Coastal Asset Management

### 16 Assess and implement where possible the findings of the hydraulic assessment to assess stormwater drainage adjacent to or within identified coastal cliffs and slopes risk areas

This project will assess Council's stormwater drainage network across high risk coastal cliffs and slope areas. The project covers:

- Identification of existing/potential stormwater issues that may trigger cliff and slope instability, and
- Development of hydraulic models and assessment of the suitability of the current network based on design and capacity.

This information will be collated to create geotechnical risk assessments and report, including recommendations to mitigate stormwater runoff risks contributing to cliff and slope instability issues.

This action will help implement these prioritised recommendations.

### 19 Implement the findings of the Shoalhaven Beaches Asset Management Strategy

Implement the findings of the Shoalhaven Beaches Asset Management Strategy in order to consolidate, maintain and upgrade the approximately 250 coastal accessways located across the 40 Council managed beaches of the LGAs.

### 17 Management of Council stormwater assets on beaches

Continue to implement high priority recommendations from the Coastal Erosion Stormwater Impact Assessment (Footprint Sustainable Engineering, 2015).



### 20 Develop a program for regular and ongoing monitoring of coastal assets and infrastructure

Undertake monitoring of assets and infrastructure exposed to coastal hazards including:

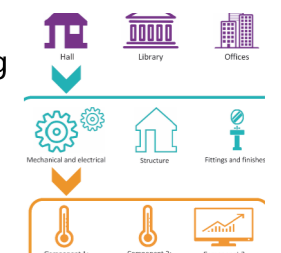
- Coastal protection structures (revetments, seawalls, training walls)
- Recreational assets including viewing platforms & coastal accessways
- Stormwater outlets and wastewater infrastructure

Including this monitoring in Councils asset management program.

### 18 Review and update all Council asset management plans (AMPs), relevant to the coastal zone.

Review and update all asset management plans (AMPs), relevant to the coastal zone. AMPs by asset type will be updated by relevant asset custodian.

Include an asset management approach to provide for replacement, relocation or retrofitting of public assets that are currently in coastal risk areas - including surf clubs and sewer, water and sewerage infrastructure, foreshore protection infrastructure, roads and access paths.





### Managing Coastal Hazards and Dune Care

#### 21 Undertake a feasibility study to assess the potential for a large beach nourishment program for the Shoalhaven LGA Beaches

Large scale beach nourishment may represent an economical and environmentally friendly long term solution for coastal hazard risk for a number of beaches across the LGA. Large scale beach nourishment has been used very effectively in other states of Australia, however it is not currently feasible in NSW as regulatory constraints prevent access to the offshore sand sources that would be needed for such large scale works.

There is potential for the existing regulatory constraints to be lifted at some point during the CMPs 10 year life cycle. Therefore, the purpose of the study would be to:

- Determine if large scale beach nourishment is feasible and economically viable across the Shoalhaven LGA; and
- Undertake the necessary environmental and social impact assessments in advance, to ensure Council can react without delay should constraints be lifted, and an opportunity arise to undertake the works.



#### 23 Develop and implement a program of dune vegetation management and rehabilitation

Strategically manage and rehabilitate coastal dune systems through weeding, revegetation, erosion control, asset maintenance, feral animal control and fauna surveys - at identified high priority sites throughout the Shoalhaven.

Dune vegetation management will also include collaborating with, and supporting Council endorsed Bushcare groups through providing educational opportunities, resources, mentoring and technical support.



#### 22 Activate "Coastal Hazard Emergency Action Sub-Plans" (CZEAS) for each beach after storm events

Activate the "Coastal Hazard Emergency Action Sub-Plans" as required after storm events for the 40 beaches managed by Council across the LGA.



The recovery works will involve:

- Nature Assisted Beach Enhancement (NABE), also known as beach scraping, in order to regrade steep dune escarpments; and
- Temporary closure and repair of beach accessways to manage public safety risk.



#### 24 Protect coastal dune systems from vegetation vandalism

Undertake investigations, educational engagement, and consultation with the Shoalhaven community to identify and deter vegetation vandalism in coastal dune systems by enacting Councils vegetation vandalism prevention policy and procedures.



### Protection and Preservation of Indigenous Cultural Heritage

#### 25 Undertake a LGA wide coastal zone Aboriginal Cultural Heritage Survey, and development of local protection/management plans

This action would involve engaging with the relevant Local Aboriginal Land Councils, Traditional Owner groups and an archaeologist to undertake an updated cultural heritage survey of the coastal zone – and in doing so:

- a) fill existing information gaps within the LGA-wide Aboriginal Cultural Heritage Mapping and
- b) update the Aboriginal Heritage Information Management System (AHIMS).



It is anticipated that there would be three main tasks for this action:

- Consultation with the relevant Local Aboriginal Land Councils and Traditional Owners and knowledge holders.
- An Aboriginal cultural heritage assessment, which should include survey field work, and recording of cultural heritage sites (such as middens sites) and detailed documentation of findings.
- The development and prioritisation of local, site specific management plans for protection and preservation of these sites.



#### 26 Engage with relevant Local Aboriginal Land Councils and local Traditional Owner Groups to develop a cultural educational and awareness program

This action would involve engaging with relevant Local Aboriginal Land Councils and local Traditional Owner Groups to develop and roll out a cultural educational and awareness program - related to the Aboriginal Cultural Heritage (ACH) of the coastal zone. Design of the program should be led by either relevant Local Aboriginal Land Councils or local Traditional Owner groups.



The program could involve educational methods such as:

- School programs including planting days, stewardship sites and hands on activities
- Signage at local sites such as beaches, estuaries, and headlands (including the use of QR codes that includes elders speaking about the history of the area)
- Brochures and information provided to tourists at caravan parks and information centres.
- Cultural tours to provide greater awareness of ACH values to both the local community and to the large population of seasonal visitors



#### 27 Provide opportunities and help build capacity to local Aboriginal Ranger programs, to enhance their role in management of Sea Country

This action would involve working with relevant Local Aboriginal Land Councils and local Traditional Owner Groups to bolster existing ranger programs and facilitate a greater role for these programs in coastal management across the Shoalhaven LGA.



- This will involve working with and supporting the ranger team coalition to help enhance/ boost their capacity and awareness of coastal management.
- Where possible, utilise Aboriginal ranger teams to undertake on ground works associated with dune restoration and monitoring programs.
- Work collaboratively to help develop the next generation of junior rangers to be a part of future coastal management across the Shoalhaven LGA.

This action is consistent with Initiative #4 of the NSW Marine Estate Management Strategy – which aims to: "Increase Aboriginal participation in Sea Country management, planning and monitoring through employment and training of Aboriginal people at a regional and local level".

