

2 PLANNING AND LEGISLATIVE FRAMEWORK

Proposed management options recommended within this SEMP must be consistent with the local government planning scheme of Redcliffe City within the Moreton Bay Regional Council area, and comply with all relevant legislation (Commonwealth, State and local) and coastal and environmental policies.

The basis and control of management of the coast of Queensland is governed by the *Coastal Protection and Management Act 1995 (Qld)*. Statutory plans under the Act, the State Coastal Management Plan (SCMP)² and South-East Queensland Regional Coastal Management Plan (SEQRCMP), set out more detailed provisions for the management of the coastal zone and recommendations in this SEMP.

Legislation and policies considered in this SEMP require consideration of issues including, but not limited to:

- The use of coastal structures for infrastructure and property protection;
- The listing of Moreton Bay as a Ramsar site and hence an area of international significance;
- Consideration of the location of potential proposed areas for sand placement for beach nourishment; and
- The maintenance of biodiversity and protection of habitat e.g. shorebird habitat and Fish Habitat Areas.

These legislative and policy considerations are described in more detail below.

2.1 Coastal Act and Plans

The *Coastal Protection and Management Act 1995 (Qld)* (the *Coastal Act*) provides for management of the coastal zone.³ The *Coastal Act* recognises the diverse range of resources and values of the coastal zone, and has the following objectives:⁴

- To provide for the protection, conservation, rehabilitation and management of the coast, including its resources and biological diversity;
- To have regard to the goal, core objectives and guiding principles of the National Strategy for Ecologically Sustainable Development in the use of the coastal zone;
- To provide, in conjunction with other legislation, a coordinated and integrated management and administrative framework for the ecologically sustainable development of the coastal zone;
- To encourage the enhancement of knowledge of coastal resources and the effect of human activities on the coastal zone.

² Note that the State Coastal Management Plan was under review at the time of development of this SEMP. The review *may* result in amendments to the State Coastal Management Plan.

³ Coastal waters and all areas to the landward side of coastal waters in which there are physical features, ecological or natural processes or human activities that affect, or potentially affect, the coast or coastal resources: s11 *Coastal Act*.

⁴ s3 *Coastal Act*.

The SCMP and SEQRCMP have been developed under the requirements of the *Coastal Act*.⁵ Both plans are statutory instruments under the *Coastal Act*, and have the effect of a State Planning Policy (SPP) under the *Integrated Planning Act 1997 (IPA)*. The Plans are designed to operate with other instruments to fulfil the objectives of the *Coastal Act*.

The Redcliffe SEMP will be required to adhere to the objectives set in the SCMP and SEQRCMP, and regional priorities will be referred to in this document and elaborated on from a local perspective.

2.1.1 Coastal Management Plans

2.1.1.1 State Coastal Management Plan

The SCMP seeks to protect and manage Queensland's coastal resources and provides an overarching framework for coastal management in Queensland. It is based on ten (10) topics for management:

- 1 Coastal Use And Development – Use and development of the coastal zone occurs in an ecologically sustainable manner.
- 2 Physical Coastal Processes – The coast is managed to allow for natural fluctuations to occur, including any that occur as a result of climate change and sea level rise, and provide protection for life and property.
- 3 Public Access To The Coast – Opportunities for public access to the coast are maintained and enhanced, consistent with the conservation of coastal resources and provision of public safety.
- 4 Water Quality – Water quality in the coastal zone is maintained at a standard that protects and maintains coastal ecosystems and their ability to support human use.
- 5 Indigenous Traditional Owner Cultural Resources – The living culture of Indigenous Traditional Owners and their connection with cultural resources within the coastal zone is valued and continues for future generations of Indigenous Traditional Owners.
- 6 Cultural Heritage – Places, buildings and objects with important cultural heritage values located on the coast are appreciated, conserved, managed and passed on to future generations.
- 7 Coastal Landscapes – The scenic and cultural values associated with coastal landscapes are protected.
- 8 Conserving Nature – Coastal ecosystems, including their ecological processes, opportunities for survival, biological diversity and potential for continuing evolutionary adaptation, are maintained, enhanced and restored.
- 9 Coordinated Management – Coastal management is coordinated and integrated across all levels of government and within the community.
- 10 Research And Information – Research programs, and data and information collection and management focus on, support and enhance effective coastal management.

In general, the *State Coastal Plan* requires that protection from erosion should not impact on coastal resources, their values or natural cycles, particularly in regard to protection of natural areas and

⁵ Chapter 2, Part 2, *Coastal Act*.

biodiversity. It also requires that structures should only be used where nourishment or other non-permanent measures are not viable.

2.1.1.2 *South-East Queensland Regional Coastal Management Plan*

The SEQRCMP applies to the coastal zone of the area between and including Maroochy Shire to Coolangatta. It operates in conjunction with the SCMP, and aims to achieve sustainable coastal management in SEQ and to avoid or minimise future adverse impacts on coastal resources. The SEQRCMP addresses the above ten topics in a more detailed manner than the SCMP, identifying areas within the region requiring special management, and developing regionally-specific outcomes. It defines the Redcliffe Peninsula eastern beaches as a Priority Area for shoreline erosion management (Map 6A, Policy 2.2.3 Shoreline Erosion). The area specified by the plan covers the coast along the mostly urban area at Redcliffe.

Within the SEQRCMP, specific regional direction is provided on 17 State Coastal Plan policies, and in addition, includes two regionally specific policies⁶ (EPA 2006). The SEQRCMP also identifies a Coastal Management District (CMD; Policy 2.9.5) over parts of the coastline of the study area (Sheet 13.11 Redcliffe and Sheet 13.14 Sandgate; refer to Appendix A). Note that the most relevant policies in relation to the recommendation of erosion management measures are Policy 2.2.2 Erosion Prone Areas, Policy 2.2.3 Shoreline Erosion Management and Policy 2.2.5 Beach Protection Structures. The applicable sections of these policies are specified below. The SEQRCMP also identifies other important considerations along the Redcliffe Peninsula foreshore that are important for erosion management planning.

Policies on Physical Coastal Process

Policy 2.2.2 Erosion Prone Areas recognises the importance of the erosion prone area as a valuable feature for its function as a coastal buffer zone (Refer to the erosion prone area for Redcliffe City, SC4006 in Appendix B).

For developed erosion prone areas such as the foreshore of the Redcliffe Peninsula, where existing development is threatened by erosion and a strategy of retreat is considered not to be achievable, the following matters must be considered in determining the most appropriate defensive action to protect land uses and infrastructure:

- The value (economic, social and environmental) of the existing development;
- The practicality and cost of any defensive action;
- The potential adverse impacts to coastal resources and values associated with any defensive action.

The SEQRCMP notes that development within an erosion prone area may include the construction of property protection works such as rock or revetment walls. However, Policy 2.2.2 requires that defensive actions involving structural engineering and stabilisation works such as revetments and boulder walls are to be avoided in the SEQ region where possible. Such works will only be supported where:

⁶ Policy 2.1.15 - *Non-tidal artificial waterways* and Policy 2.4.7 - *Algal Bloom Management*.

- There is an immediate or critical threat of loss or damage to existing development from erosion impacts;
- No viable alternatives such as revegetation or bank reconstruction have been demonstrated to provide a similar or adequate level of protection from erosion;
- Potential adverse impacts on coastal processes and scenic amenity are minimised through remedial actions, such as beach nourishment to restore the beach and minimise impact on adjacent coast.

As mentioned above, Policy 2.2.3 Shoreline Erosion Management (SEQR CMP) identifies Redcliffe Peninsula eastern beaches as a priority area for shoreline erosion management. The SEQR CMP requires, when preparing SEMP, preference be given to options that maintain natural coastal processes and recreational amenity. It also requires that where structures are found to be necessary, beach nourishment, revegetation and other similar actions should be considered to mitigate potential impacts of the works.

Policy 2.2.5 Beach Protection Structures in the SCMP⁷ requires that any shoreline defence actions do not adversely impact on coastal resources and their values or the natural cycles of erosion and accretion of beaches. Where structures are considered as management options, the State policy requires that the construction of beach protection structures in coastal waters will only be approved where:

- a) There is a demonstrated need in the public interest; and
- b) Comprehensive investigation has been carried out and it can be demonstrated that:
 - (i) There would not be any significant adverse impact on longshore transport of sediments; and
 - (ii) There would be no increase in coastal hazards for the neighbouring foreshore.

When considering the above policies, it should be recognised that most of the existing Redcliffe shoreline is artificial as discussed in Section 3 of the SEMP.

Other Relevant Policies

The SEQR CMP specifically identifies policies relevant to the study area, and therefore requires consideration of these policies in development of the recommendations. Additional policies may also be relevant dependent on the final works carried out (e.g. cultural resources, cultural heritage and coastal landscapes):

- *Policy 2.1.5 Maritime Infrastructure* – The SCMP highlights that maritime infrastructure such as marinas and boat ramps and jetties contribute to the tourism industry and provide important recreational facilities, and while they are necessarily located on the coast, they must be considered in the context of other competing uses. The SEQR CMP identifies that the shoreline of the study area is considered partly developed and partly undeveloped tidal waterway (see Map 3, SEQR CMP).

⁷ Note there is no regional policy for Policy 2.2.5.

- *Policy 2.1.8 Dredging* - Dredging (potentially required for beach nourishment) is considered an inappropriate activity in many areas within the region due to the high values of coastal resources. The regional policy outlines that dredging operations are to avoid disturbance in areas including areas of state significance (natural resources), state significance (cultural heritage), coastal biodiversity significance and Fish Habitat Areas (FHAs). Dredge-material that is clean uncontaminated sand may be disposed in coastal waters of SEQ, where the placement is within approved dredge-material placement sites for beach nourishment purposes or is for a beneficial coastal management purpose. However, placement of sand must not adversely impact on identified environmental values and water quality objectives under the *EPP (Water)*, declared Fish Habitat Areas under the *Fisheries Act 1994* (i.e. the area to the west of Clontarf Point in Hays Inlet FHA; refer Appendix C) or high value zones under the *Marine Park (Moreton Bay) Zoning Plan 1997* (Appendix D).
- *Policy 2.1.10 Tourism and Recreational Activities* – Intense tourism and recreational pressures are important community and economic assets. Areas listed in the SEQRCMP that experience high visitation and contribute significantly to the state and regional economies include the Redcliffe Peninsula. These high-use recreational coastal locations usually require additional management to maintain and protect the coastal resources and values. Main management methods include intensive physical management and/or long-term planning (such as shoreline erosion management plans).
- *Policy 2.2.1 Climate Change* – The SCMP requires consideration of the implications of climate change, including a rise in global mean sea level, higher average air temperatures and possibly increased climatic variability. These are predicted to cause impacts to the coastal zone and human settlements. The SEQ Regional Plan also provides further direction (refer Section 2.3.1).
- *Policy 2.2.4 Coastal Hazards* The SCMP outlines that where areas vulnerable to storm tide inundation have been developed, further development in these areas needs to address the vulnerability to sea level rise and storm tide inundation and the proposed access to and protection of evacuation routes. The Policy requires that local government should have in place counter-disaster plans to address coastal hazards in vulnerable areas. The EPA guideline addressing storm tide inundation is also required to be considered. Note that the SEQ Regional Plan provides a Policy on natural hazards (refer Section 2.3.1).
- *Policy 2.3.1 – Future Need for Access* – The SEMP will need to ensure that shoreline erosion management measures are designed to provide continues access to the coast and the beach in the study area.
- *Policy 2.4.6 Acid Sulfate Soils* - Potential and actual acid sulphate soils (PASS) are found in the north western section of the study area (SEQRCMP). Appendix E outlines these PASS areas and defines acid sulphate soils risk areas throughout the study area (sourced from the Redcliffe City Planning Scheme and based on 5m and 20m AHD). Recommended shoreline erosion management measures must be considered in accordance with the *State Planning Policy 2/02 (SPP 2/02) - Planning and managing development involving acid sulfate soils*.
- *Policy 2.4.7 Algal Blooms* –Activities identified in the SEQRCMP that may increase the risk of nutrients entering coastal waterways include dredging, which may be required for beach nourishment. The SEQRCMP requires that best practice water quality management be implemented in areas with a high to very high nutrient export rating (e.g. in the north-west of

the study area). It also requires that development and activities (which may include shoreline erosion management measures) in these areas can demonstrate:

- a) no lowering of existing groundwater levels where potent or actual acid sulfate soils are present;
 - b) avoidance or minimisation of the export of nutrients of concern exiting the site through surface water or groundwater;
 - c) no disturbance of coastal wetlands;
 - d) the maintenance and enhancement of riparian vegetation; and
 - e) incorporation of best practice stormwater quality management.
- *Policy 2.6.1 Areas of State Significance (Cultural Heritage)* – While no areas within the study area are identified within the SEQRCMP as areas of state significance (cultural heritage), the SCMP requires that the coast be managed to conserve cultural heritage places and objects in accordance with State and Commonwealth laws (e.g. *Aboriginal Cultural Heritage Act 2003*). Cultural heritage sites in the study area are discussed further in Section 2.4.1.
 - *Policy 2.8.1 Areas of state significance (natural resources)* – These areas include significant coastal wetlands, Nature Conservation Act Protected Areas and significant coastal dunes. Areas of state significance (natural resources) play a critical role in maintaining a healthy functioning coast and are key elements of coastal resources that the State government is seeking to protect and manage. These important coastal resources have associated economic (e.g. fisheries habitats) and social (e.g. recreational amenity) values, and must be protected from land uses and activities that may have adverse impacts on their continued integrity and functioning. Uses and activities adjacent to Areas of state significance (natural resources) also have the potential to impact on their values (e.g. through degradation of water quality). The SEQRCMP identifies areas of state significance (natural resources) for the study area as significant coastal wetlands, mapped as occurring at Redcliffe Point on the Redcliffe Peninsula, and the area west of Clontarf Point (Map 8, SEQRCMP).
 - *Policy 2.8.2 Coastal Wetlands* – This Policy requires the conservation and management of Queensland's coastal wetlands, including land within 100m of a coastal wetland and identifies the area to the west of Clontarf Point, Redcliffe Point and other small areas along the Redcliffe Peninsula eastern beaches (mostly small headlands) as coastal wetland (see Map 9, SEQRCMP) Note that Ramsar wetlands are also mapped for the study area (as part of the Moreton Bay Ramsar site; Appendix F) and that mangroves are mapped as occurring within and immediately adjacent to the study area⁸ (to the west of Clontarf Point; Appendix G). Coastal wetlands in the study area are experiencing pressures from direct and cumulative impacts. Consideration should be given to the impacts of implementing shoreline erosion management measures such as seawalls or sand removal/placement, on coastal wetland functions and habitat for rare, threatened and migratory species.
 - *Policy 2.8.3 Biodiversity* – Biodiversity is fundamental to the maintenance of sustainable ecosystems and other features and processes of the coastal zone. Threats to biodiversity can be broadly classified as habitat loss, decline in the habitat quality, changes in ecological processes

⁸ No site surveys have been undertaken to ground-truth the marine vegetation mapping in Appendix G. At the time of application for development approval it would need to be determined whether marine vegetation would be impacted by the proposed works (refer Section 2.2.2.1).

and direct removal of species. A key objective of this policy is to maintain the integrity of tidal flats and protect beaches that provide significant wildlife habitats. Areas of important biodiversity within and adjacent to the study area include:

- Fish Habitat Areas - Declared Fish Habitat Areas occur in the south of the study area (west of Clontarf Point; Appendix C). These protected areas are declared under the *Fisheries Act 1994*.
 - Coastal wetlands (see Policy 2.8.2; also Policy 2.8.1).
 - Shorebird habitat – Shorebird habitat is mapped for the entire coastline of the study area (refer Appendix H) including a large area to the west of Clontarf Point.
 - Coastal Biodiversity Significance (terrestrial) - The Supporting Document to the SEQRCMP also designates the area to the west of Clontarf Point as an area of Coastal Biodiversity Significance (terrestrial) (Appendix I).
- *Policy 2.8.4 Rehabilitation of Coastal Resources* – The SEQRCMP requires rehabilitation and enhancement of coastal resources to improve values and functioning of the coastal zone. While there are no specific locations for rehabilitation defined in this Policy within the Redcliffe Peninsula area, general areas defined for priority rehabilitation and enhancement include coastal wetlands (refer Policies 2.8.1 and 2.8.2) and shorebird nesting, roosting and feeding sites (Policy 2.8.3). This policy also requires generally the re-establishment and maintenance of vegetation along the foreshore between Scarborough and Shorncliffe.
 - *Policy 2.9.3 State Land on the Coast* – Excludes freehold land or land subject to a lease for the purposes of this Plan, provides a key opportunity for the State Government to directly influence the use and management of land on the coast and achieve coastal management outcomes. Consultation with State agencies, particularly EPA, will be carried out during the development of recommendations within this SEMP.
 - **Key Coastal Sites and Localities**

The study area lies within key coastal site (KCS) 1 (Hays Inlet and Brisbane Northern Wetlands; refer Appendix J). The SEQRCMP outlines the significance of this site:

The site consists of a network of wetlands that are classified as areas of state significance (natural resources) and low-lying estuary systems containing extensive areas of mudflats, shorebird habitat and seagrass beds. Some of the wetlands within this site are of international significance under the Ramsar Convention and are included in the Directory of Important Wetlands in Australia. The area also contains fish habitat areas, cultural resources, remnant coastal ecosystems, biodiversity corridors, endangered regional ecosystems and endangered, rare and vulnerable fauna and flora species. It is also a critical corridor link in the region.

While only a small section of the study area is within KCS 1, the high ecological values within the area will need to be considered in the development of the SEMP.

The SEQRCMP outlines the desired coastal outcome relevant to the SEMP as maintenance of this site by local governments and other agencies as a key conservation. Part of the aim is to develop a coordinated approach to factors including:

- establishing environmental values of wetlands for their aquatic biodiversity, ecosystem functioning role and recreational and educational values;
- rehabilitating and protecting habitat and biodiversity corridors; and
- protecting the declared Hays Inlet Fish Habitat Area and retaining fish habitats.

2.2 Other Legislation and Approvals

The following legislation may need to be considered in the development of the SEMP and where approvals are necessary to carry out potential management options for shoreline erosion management along the foreshore of the Redcliffe Peninsula. This section also outlines the current (August 2008) approvals process relevant for recommended works.

2.2.1 Commonwealth

2.2.1.1 EPBC Act

Referral to the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) is required for actions that have or are likely to have a significant impact on a matter of national environmental significance (NES) under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. Matters of NES cover a range of issues such as Ramsar sites and migratory species listed under international treaties including Japan Australia Migratory Bird Agreement (JAMBA) or the China Australia Migratory Bird Agreement (CAMBA) and the Convention on Migratory Species (Bonn Convention). Matters of NES that *may* be significantly impacted by coastal protection works in the study area include, but are not limited to (refer to Appendix K; search completed 3 August 2008):

- Ramsar sites (Moreton Bay Ramsar site⁹)
- Listed threatened species and ecological communities; and
- Migratory species.

If coastal protection works are declared a 'controlled action', approval will be required from DEWHA before the works can commence.

Queensland and the Commonwealth have an agreement (Bilateral agreement) pursuant to the *EPBC Act*, which allows any controlled action requiring environmental impact assessment (EIA) to be assessed according to the EIA processes under State law.

2.2.2 Queensland

2.2.2.1 Integrated Planning Act 1997

Coastal erosion management works may require development approval under the Integrated Development Assessment System (IDAS) of the *Integrated Planning Act 1997 (IPA)*. Assessment under IPA for potential shoreline erosion management recommendations may be required according to triggers including but not limited to:

⁹ Note that Moreton Bay is also a site in the East Asian-Australian shorebird site network.

- Operational works in a tidal area or coastal management district including, for example:
 - Removing or interfering with quarry material;
 - Disposing of dredge spoil or other solid waste material in tidal water.
- Fisheries matters. These include removal, destruction or damage to marine plants, and works or related activities in a declared fish habitat area (FHA) (*Fisheries Act 1994*). Policies on the DPI website should be considered where marine plants or Fish Habitat Areas may be impacted.¹⁰
- Environmentally relevant activities (ERA's) (under the *Environmental Protection Act 1994*), for example ERA16 (dredging).
- Acid sulfate soils. The proposed works must be considered in accordance with the State Planning Policy 2/02 (SPP 2/02) - Planning and managing development involving acid sulfate soils.

At the time of application, Council should determine whether resource entitlement consent is required from State agencies, or owner's consent for land where management measures take place.

2.2.2.2 Land Act 1994

Land tenure is granted pursuant to the *Land Act 1994*. Any effect of proposed protection works upon State land, in terms of direct or indirect implications (e.g. impact on access) requires approval from the State. This is also covered through the IDAS process, where the State must provide resource entitlement or owner's consent for works on Unallocated State Land and other State Land.

2.2.2.3 Marine Parks Act 2004

Queensland State Marine Parks are designed to conserve the marine and intertidal area and other internal waters of Queensland, and they extend to the high water mark.¹¹ The main legislation and regulation governing state marine parks in Queensland are the *Marine Parks Act 2004 (Act)* and *Marine Parks Regulation 2006 (Regulation)*.

The *Marine Parks (Moreton Bay) Zoning Plan 2008 (Zoning Plan)* came into effect on 1 March 2009, and identifies the following zones for the study area (Appendix D):

- Habitat Protection Zone – most of the study area;
- Conservation Park Zone – (1) from the south-western boundary of the study area to Woody Point (including some of Woody Point), and (2) an area including the shoreline of Castlereagh Point and extending to the north-east; and
- Marine National Park Zone – an area at Woody Point, with the northern boundary aligning with Scotts Point.

The objects for each of the zones are defined in the *Regulation* and are outlined in Table 2-1.

¹⁰ For example, Batton, R. (2007) *Tidal fish habitats, erosion control and beach replenishment*, FHMOP 010, DPI&F, Brisbane.

¹¹ EPA guidance on "high water" is as follows: High water mark usually equates with the highest flotsam line on the beach. Within estuaries, high water mark usually corresponds with the furthest extent of marine vegetation such as mangroves, saltwater couch or bare salt flats (EPA website).

The *Zoning Plan* defines those activities that may occur within each zone with and without permission. Relevant shoreline erosion management measures are not listed as activities that can be undertaken without permission. However, activities listed as requiring permission (ie. a marine park permit) cover the relevant shoreline erosion management measures (Refer to Table 2-1). Where a relevant activity requiring permission requires the activity or works to be consistent with the objects of the zone, the applicant will need to demonstrate how the works are consistent with the objects for the zone where the proposed works are to occur. A number of other considerations are required to be taken into account when issuing a permit for works in a marine park, including those from the Regulation and the Zoning Plan.

Table 2-1 Objects for marine park zones within the study area

Relevant Permissible Activities	Zone Objects
Habitat Protection Zone	
<ul style="list-style-type: none"> • Carrying out works consistent with the objects for the habitat protection zone. • Carrying out major works in a works area. • Another purpose (other than a purpose/use not requiring permission) consistent with the objects for the habitat protection zone. 	<ul style="list-style-type: none"> a) To provide for the conservation of the areas of the marine park within the zone through the protection and management of sensitive habitats that are generally free from potentially damaging activities; and b) Subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use of the areas.
Conservation Park Zone	
<ul style="list-style-type: none"> • Carrying out works consistent with the objects for the conservation park zone. • Another purpose (other than a purpose/use not requiring permission) consistent with the objects for the conservation park zone. 	<ul style="list-style-type: none"> a) To provide for the protection of the natural integrity and values of the areas of the marine park within the zone; and b) Subject to the objective mentioned in paragraph (a), to provide opportunities for: <ul style="list-style-type: none"> i) the presentation of the values of the relatively undisturbed areas of the marine park within the zone; and ii) the continuation of existing fishing use in the area.
Marine National Park Zone	
<ul style="list-style-type: none"> • Carrying out works consistent with the objects for the marine national park zone. • Another purpose (other than a purpose/use not requiring permission) consistent with the objects for the marine national park zone. 	<ul style="list-style-type: none"> a) To provide for the conservation of the areas of the marine park within the zone; and b) Subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use and enjoyment, including, for example, limited extractive use, of the areas.

2.2.2.4 Nature Conservation Act 1992

The object of the *Nature Conservation Act 1992 (NC Act)* is the conservation of nature. Principles of biological diversity and ecologically sustainable development, as well as criteria developed by the World Conservation Union (International Union for the Conservation of Nature and Natural Resources) are used to establish and manage areas protected under the *NC Act*. However, no *NC Act* protected areas are within the study area. The *Act* also ensures the recognition of the interest, and involvement, of Aborigines and Torres Strait Islanders in conservation of nature.

Regulations under the *NC Act*, which are relevant to the SEMP include:

- *Nature Conservation (Wildlife) Regulation 2006* - The Regulation relates to the significance of certain species (listed as presumed extinct, endangered, vulnerable, rare, common, international, and prohibited), and the management intent and principles of these species. The *Nature Conservation (Wildlife Management) Regulation 2006* applies to wildlife **not** within a protected area and must be read in conjunction with the *Nature Conservation (Administration) Regulation 2006*.
- *Wildlife Regulation* - The Regulation relates to the significance of certain species (listed as presumed extinct, endangered, vulnerable, rare, common, international, and prohibited), and the management intent and principles of these species. It may apply to the SEMP through the listing of fauna and/or flora in the Redcliffe area. For example, species protected under the Regulation include the six species of marine turtles, all of which occur in Moreton Bay, and three (loggerhead, hawksbill and green turtle) are year-round residents of Moreton Bay. Moreton Bay has the most significant loggerhead population in Australia. The loggerhead turtle is listed as endangered under both the *NC (Wildlife) Regulation* and the *EPBC Act*.¹² The green and hawksbill turtles are both listed as vulnerable under the *NC (Wildlife) Regulation* and the *EPBC Act*.¹³ The *NC (Wildlife) Regulation* and the *EPBC Act* also list as protected many of Moreton Bay's shorebirds. Other listed species also occur within Moreton Bay and the study area.

2.2.2.5 *Environmental Protection Act 1994*

The *Environmental Protection Act 1994* and *Regulation* are administered by the Environmental Protection Agency (EPA) with the objective of protecting Queensland's environment while allowing for development in an ecologically sustainable manner.

The Act sets out a general environmental duty (s36) which, in the context of the SEMP, requires that for any shoreline erosion management works, Council must not carry out any activities that cause, or are likely to cause, environmental harm unless they take reasonable and practical steps to prevent or minimise the harm.

Environmentally relevant activities (ERAs) are to be authorised by an administering authority. Schedule 1 of the *Environmental Protection Regulation 1998* lists all ERAs. ERA 16 has been specified under Section 2.2.2.1.

Under the *Environmental Protection Act 1994*, environmental protection policies (EPPs) may be prepared to enhance or protect Queensland's environment. The EPP most relevant to shoreline erosion management measures to be outlined within the SEMP is the *Environmental Protection (Water) Policy* (EPP (Water)). The purpose of the EPP Water is to achieve ecologically sustainable development in relation to Queensland waters. It sets a framework for managing environmental impacts on water and identifying the environmental values and the guidelines needed to protect the water environment.

¹² The loggerhead is listed by the IUCN as Endangered.

¹³ The green and hawksbill turtles are listed by the IUCN as Endangered and Critically Endangered respectively.

2.2.3 Indigenous Legal Issues

When undertaking coastal protection works, Council must take all reasonable and practicable measures to ensure their activities do not harm Aboriginal cultural heritage, pursuant to the *Aboriginal Cultural Heritage Act 2003*. Measures that Council may take to ensure compliance with this Act include:

- Following the statutory 'duty of care' guidelines, which may require consultation with the relevant Aboriginal party; or
- Development and approval of a Cultural Heritage Management Plan.

Compliance with the *Aboriginal Cultural Heritage Act 2003* should be determined at the planning stage of any coastal protection works.

Native title legislation in Australia provides for the recognition and protection of native title. The Commonwealth *Native Title Act 1993* and *Native Title (Queensland) Act 1993* should be considered prior to the commencement of coastal protection works. Note that it is a requirement under the Native Title Act for native title parties to be given notification and an opportunity to comment on a wide range of activities that could affect native title rights, and this includes most activities authorised by Marine Park permits. In these cases, it is usual that the EPA provides notification to registered claimants and the Native Title Representative Body, and takes their comments into account when deciding the application. However, Council should ensure that notification and consideration of comments is conducted from the beginning of the process.

2.2.4 Other Considerations

It may be necessary to liaise with, and obtain permission from the following agencies regarding the legislation and issues mentioned above:

- Environmental Protection Agency (e.g. dredging, nourishment, conservation values, and ecological issues) and Queensland Parks and Wildlife (Moreton Bay Marine Park issues);
- Department of Primary Industries and Fisheries (e.g. fish habitat areas and marine plants);
- Department of Natural Resources and Water (e.g. ownership of Unallocated State Land); and
- Queensland Transport / Regional Harbour Master (e.g. navigation and navigation channels).

2.3 Regional Plans

The *South East Queensland Regional Plan 2005-2026* and the *Shorebird Management Strategy – Moreton Bay* need to be considered in the SEMP in the context of recommending appropriate shoreline erosion management measures for the South East Queensland region. However, depending on the specific erosion management options recommended, there may be other relevant regional plans that need to be considered.

2.3.1 SEQ Regional Plan

The purpose of the South East Queensland Regional Plan 2005-2026 (OUM 2005) is to provide a sustainable growth management strategy for SEQ to the year 2026, including the protection and

enhancement of the region's natural environment, biodiversity and natural resources. It is a statutory plan to which all other planning in SEQ, such as local government planning schemes, state plans and policies, must align. The Plan applies to those local government areas (LGAs) in the SEQ region and Queensland waters adjacent to these LGAs, including the study area for the SEMP. The SEQ Regional Plan considers that Redcliffe is part of the major urban area of SEQ with the whole of the study area identified as within the Urban Footprint.

Policies of the SEQ Regional Plan that may be relevant to erosion management along the shoreline of the Redcliffe Peninsula, and should be considered in the development of recommendations are:

- Policy 2.1 Biodiversity – The overarching principle is to conserve and manage the region's biodiversity values and maintain supporting ecological processes. While no specific reference is made to locations within the study area, Policy 2.1.4 requires that potential adverse impacts in areas of state or regional biodiversity significance inside the Urban Footprint are to be avoided or mitigated, having regard to the development intent for the land in local government planning schemes and associated planning instruments. Areas identified in the Regional Plan as being of state and regional biodiversity significance (Map 4 of the Plan) are based on areas of nature conservation significance outlined in the Regional Nature Conservation Strategy (see Appendix L; also refer to Overlay Map 1 of the *Redcliffe City Planning Scheme 2005*). The area to the west of Clontarf Point is identified as being of state significance.
- Policy 2.4 Managing the Coast – The overarching principle requires the protection and maintenance of the region's coast, including the foreshore, coastal wetlands, dunes, marine ecosystems and coastal marine waters. In particular, the Policies require the maintenance and enhancement of public access to the coast, foreshores and tidal waterways (Policy 2.4.3) and to ensure that the use and management of the coast provides for natural fluctuations in coastal processes, including storm tide inundation, climate change and sea level rise (Policy 2.4.4). Notes on these Policies outline that this will be achieved through the State and Regional Coastal Management Plans (see Section 2.1.1). Additionally the notes identify that coastal management is achieved through inclusion of maintenance and management of erosion-prone areas and natural coastal processes through planning processes (e.g. SEMP).
- Policy 2.5 Waterways and Wetlands – Policy 2.5.1 requires that the values and natural functions of the region's waterways, wetlands, and riparian areas are recognised and taken into account in planning, natural resource management, development assessment and decision making. This Policy should be applied to the area to the west of Clontarf Point.
- Policy 2.6 Natural Hazards – Requires that risk and exposure of the community to adverse impacts of natural hazards such as flood, storm tide, bushfire and landslide should be reduced. It is noted that although coastal inundation has been considered as part of this SEMP, the SEMP is not purposely aimed to address hazards from coastal inundation.
- Policy 3.2 Scenic Amenity – Acknowledge, protect and manage significant scenic amenity areas and features.
- Other policies such as Traditional Owner engagement (Policy 7.1) and Community engagement (Policy 7.2) may also be relevant. Further policies may be of relevance dependent on the final shoreline erosion management measures.

2.3.2 Shorebird Management Strategy – Moreton Bay

As outlined in Sections 2.1.1.2 and 2.2.1.1, Moreton Bay is a declared Ramsar site, and is also host to 30 of the 43 migratory shorebird species found in Moreton Bay listed under the Japan Australia Migratory Bird Agreement (JAMBA) or the China Australia Migratory Bird Agreement (CAMBA). In response to the need to protect these important shorebird species, the EPA and QPW have developed the *Shorebird Management Strategy – Moreton Bay* (June 2005). Within Moreton Bay, five main approaches have been adopted for the conservation of shorebirds:

- Protecting shorebird habitat;
- Protecting shorebirds from disturbance;
- Protecting critical shorebird sites;
- Community education; and
- Research and monitoring.

In particular, actions identified within the Strategy for the first three approaches are the most relevant actions to the SEMP. Some of these include:

- Maintenance and enhancement of shorebird habitats;
- Restricting coastal development to areas where its impact on shorebird habitat is minimal; and
- Minimise human disturbance of shorebirds.

These actions should be considered in development of the SEMP.

2.4 Local Government

An important issue relevant to jurisdiction over the coastline is the definition of the high water mark, which is the seaward extent of jurisdiction for local government under the *Local Government Act 1993*. The Act also enables local government to obtain specific jurisdiction from the State over the beach, between high and low water mark for special purposes, for example, beach protection works.

Local government controls land use and activity under the local planning scheme (under the *IPA*) and Local Laws (under the *Local Government Act 1993*). Local government also has legislative responsibilities under the *Environmental Protection Act 1994*. Local government generally has responsibilities relevant to coastal management for, *inter alia*:

- Land use control;
- Recreational planning;
- Management of local reserves;
- Environmental protection and rehabilitation; and
- Monitoring.

The most relevant local government planning document is the *Redcliffe City Planning Scheme* however, additional Council Policies (e.g. *Biodiversity Policy (2008)* – Corporate Policy- 3070) may be relevant depending on the specific shoreline erosion management measures implemented.

Further, community group activities such as dune revegetation may also need to be considered and Council may need to consult these groups in the development of the SEMP.

2.4.1 Redcliffe City Planning Scheme Plan

The *Redcliffe City Planning Scheme 2005* provides the vision for the planning and management of Redcliffe City within the Moreton Bay Regional Council area. Aspects of the Planning Scheme are relevant to the development and implementation of the SEMP.

Desired environmental outcomes (DEOs) express what is sought to be achieved by the Planning Scheme based on the principles of ecological sustainability established in the *Integrated Planning Act 1997*. Accordingly, they address the issues of community need and well-being, economic activity and the protection of the environment. DEOs relevant to the SEMP include (see Part 3 Planning Scheme):

- The ecological and biodiversity values of areas with identified natural values together with the economic values of the Fish Habitat Areas are not compromised;
- Impacts on water ... quality by ... loss of vegetation, soil erosion and disturbance of acid sulphate soils are minimised;
- Public areas and places of cultural significance are protected ...¹⁴

The Strategy Map identifies Residential, Urban Village, Open Space and Recreation, Conservation Area (to the west of Clontarf Point) as within or immediately adjacent to the study area. The Codes of the Planning Scheme identify the overall outcomes required for each zone, for example the Natural Values Zone code requires that areas that have important environmental features including Ramsar wetlands and Fish Habitat Areas are protected, and the conservation value of the zone is retained.

Overlay maps identified as applying to the study area include:¹⁵

- Biodiversity values – Overlay Map 1 (Appendix L);
- Fish Habitat Areas – Overlay Map 4 (Appendix C);
- Acid Sulfate Soils Risk Areas – Overlay Map 5 (Appendix E);
- Ramsar Wetlands – Overlay Map 6 (Appendix F); and
- Cultural Heritage – Overlay Map 8 (Appendix M).

Shoreline erosion management measures recommended in the SEMP will need to be designed during the detailed design phase to ensure the proposed works comply with the relevant assessment criteria in the Zone and Specific Outcomes in the Overlay Codes. Where no probably solutions are defined within the Zone and Overlay Codes, the SEMP will be integral in providing a solution for the achievement of outcomes required in the Codes.

¹⁴ Places of cultural significance along the foreshore of the study area are identified in Appendix M, including the Hornibrook Highway, Woody Point Bathing Pavilion, Gayundah (Ship Wreck), Margate Bathing Pavilion, Sutton's Beach Bathing Pavilion, Oxley Memorial, and Redcliffe Jetty Pavilion. These locations must not be impacted, and are required to be protected, through any shoreline erosion management measures recommended in the SEMP. Note that a Cultural Heritage Management Report may be required to accompany a development application for recommended shoreline erosion management works at a site listed in the Cultural Heritage Overlay Code.

¹⁵ Note that the following maps in the Appendices may not be the overlay maps from the Planning Scheme, but provide the relevant layers referred to in the text.