Great Sandy Marine Park Zoning Plan Review

HAVE YOUR SAY

DRAFT ZONING PLAN
CONSULTATION REGULATORY IMPACT STATEMENT
SEPTEMBER 2022

Queensland Government

Prepared by: Queensland Parks and Wildlife Service and Partnerships, Department of Environment and Science

The Department of Environment and Science acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past, present and emerging.

The department is committed to respecting, protecting and promoting human rights, and our obligations under the Human Rights Act 2019.

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1 Executive Summary

The conservation and management of large areas of the marine environment in Queensland is regulated under the *Marine Parks Act 2004* and its subordinate legislation which includes marine park zoning plans. The Department of Environment and Science (the department) manages the Great Sandy Marine Park through the Marine Parks (Great Sandy) Zoning Plan 2017. The zoning plan identifies different zones and designated areas within the marine park and a range of provisions to manage different activities. The zone objectives (described in the Marine Parks Regulation 2017) provide an indication of the level of protection for each zone. The provisions for each zone type lists activities that can occur "as of right", that is, without permission and those for which permission (a permit) is required. Designated areas overlay zones and are established to manage specific activities or issues at particular locations within the marine park and as such their provisions can be tailored to suit management objectives.

The department's comprehensive review of the Marine Parks (Great Sandy) Zoning Plan 2017 (the zoning plan) is a requirement of the *Statutory Instruments Act 1992* and has investigated whether the existing management arrangements:

- conform with contemporary marine protected area management principles
- adequately represent the range of habitat types and protect threatened species that occur within the park
- conserve natural and cultural values while allowing for a range of sustainable uses (both recreational and commercial) to occur.

The review has assessed the continued need, effectiveness and efficiency of the current zoning plan including (i) whether the zoning plan should continue in its current form with no amendments, or (ii) whether the zoning plan should be re-made with amendments to improve its effectiveness at conserving the marine environment. The conservation of the marine environment is the purpose of the *Marine Parks Act 2004*.

Identification of the problem

The department has received feedback from First Nations peoples, key stakeholder and user groups, scientists, local government and the community on a number of problems in relation to the current management arrangements including:

- inadequate habitat protection via representation in Marine National Park (MNP) zones
- conflict between fishing sectors in waterways, particularly those within the designated Great Sandy Area
- inadequate protection of threatened species and unique habitat types
- inadequate consideration and protection of cultural heritage sites and values
- the need for complementary management arrangements with those at the northern end of K'gari (Fraser Island)
- incompatible zoning to meet coastal management requirements to mitigate the impacts of climate change
- some marine park administrative and compliance matters.

Objectives of government action

In addressing these problems, this zoning plan review has focussed on the following key objectives:

- Improve the current network of zones to better reflect global biodiversity targets, meet contemporary marine protected area management principles for habitat protection and deliver an integrated zoning framework to balance conservation and use of the marine park.
- Address specific threats to habitat quality, integrity and management in various locations throughout the marine park.
- Address conflict between fishing sectors in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (the designated Great Sandy Area).
- Improve the protection and potential for long-term population recovery of threatened species and support state, national and international obligations.
- Protect cultural values, respect native title rights and recognise the responsibilities of First Nations peoples to Care for Country.
- Complement the management of the marine park with existing declared Fish Habitat Areas (FHAs) and adjoining National Parks and the K'gari (Fraser Island) World Heritage Area.
- Enable authorisation and/or undertaking of works at various locations within the marine park to address a range of coastal management issues.
- Ensure maximum penalties for offences reflect the environmental consequences of the offence.
- Ensure the outer boundary is defined in such a way that the accuracy and awareness of the extent of the marine park is improved.

Consideration of options and impact analysis

A number of options have been considered against the "base case" of no change to the current zoning plan provisions, in order to develop a preferred approach to address the identified problems and improve the effectiveness and efficiency of the zoning plan at conserving the marine environment within the Great Sandy Marine Park. These options (refer Table A) are presented in this Consultation Regulatory Impact Statement (RIS) with an impact analysis of the environmental and socio-economic costs and benefits of each option (see sections 6 and 7).

This RIS seeks to identify and, where possible, assess the impact of policy options on the environment, the community, business and government. Limitations of fisheries data, in particular, have constrained the ability of impacts on the fishing community and industries to be fully assessed. This is explicitly acknowledged and a key purpose of this RIS is to articulate preferred policy approaches so that stakeholders and affected individuals and businesses can consider these and make submissions to inform Government consideration, both with respect to zoning plan decisions and the development of any means of mitigating impacts.

Consequently, a preferred approach to address each identified problem with the current zoning plan is identified and all proposed changes to the network of zones and designated areas plus other management provisions, to implement the preferred approach, have been integrated into a draft zoning plan (see Appendix 4, Appendix 6 and Appendix 9). Appendix 10 summarises all changes. The potential benefits and costs of these proposed changes to the environment, business and industry, the community and government, are also presented (for a summary see Table 8, in section 8).

If no changes were made to the current zoning plan, problems and related issues raised by stakeholders and the community would not be resolved, community expectations for improved management of the marine park would not be met and the ability to improve the effectiveness of the zoning plan at conserving the marine environment would not be realised. The benefits of retaining the current zoning plan are modest, in that the financial impost to government would be negligible and existing uses and interests of stakeholders would be unaffected. However, if amendments to the current zoning plan are made, a range of positive and necessary conservation outcomes would be realised, and opportunities to resolve significant issues of conflict over resources and improvements to the management of the marine park become possible.

Table A: Objectives of government action in relation to the problems (that fall under a number of main themes) with the current zoning plan and options considered to address problems, including the preferred option.

Objective	Problem	Options Considered (preferred option shown in bold that is included in the draft zoning plan)
Theme: Habitat protection		
Improve the current network of zones to better reflect global biodiversity targets, reflect contemporary marine protected area management principles and more effectively deliver a zoning framework that balances conservation and use	Current zoning not providing adequate habitat representation, reflecting global biodiversity targets or meeting contemporary marine protected area management principles **Section 6.1.1**	1. No change 2. Change zoning to include 8.3% of the area of the marine park in Marine National Park zones with supporting changes to other zones **3. Change zoning to include 12.8% of the area of the marine park in Marine National Park zones with supporting changes to other zones** 4. Change zoning to include 20.6% of the area of the marine park in Marine National Park zones with supporting changes to other zones
Address specific threats to habitat quality, integrity and management in various locations throughout the marine park.	Sensitive habitats at two sites at Point Vernon and one site in Platypus Bay at risk of anchoring impacts **Section 6.1.2**	1. No change 2. Establish Marine National Park zones over the three sensitive sites **3. Establish designated No Anchoring Areas over the three sensitive sites**
	Benthic habitats in the lower reaches of the Mary River impacted by beam trawling **Section 6.1.3**	1. No change 2. Phase out beam trawling in the lower reaches of the Mary River after 5 years **3. Immediately phase out beam trawling in the lower reaches of the Mary River**

Objective	Problem	Options Considered (preferred option shown in bold that is included in the draft zoning plan)
	Habitats in the Great Sandy Strait impacted by commercial bloodworming. **Section 6.1.4**	1. No change 2. Phase out commercial bloodworming from the Great Sandy Strait after 5 years 3. **Immediately phase out bloodworming in the Great Sandy Strait**
	Conservation Park zone boundaries at the mouths of Coonarr, Coongul, Awinya and Wathumba Creeks not effectively accommodating dynamic coastal processes. **Section 6.1.5**	1. No change **2. Extension of the Conservation Park zone boundaries beyond the creek mouths**
Theme: Conflict in the waterways of the designated Great Sandy Area		
Address conflict between fishing sectors in Baffle Creek, Elliott River, Burrum River system, the Great Sandy Strait, and Tin Can Inlet (the designated Great Sandy Area waterways).	Community confidence in the marine park's management being eroded, as a result of ongoing conflict between fishing sectors and concern from a broad section of the community, regarding the social and ecological impacts of commercial net fishing within these waterways. **Section 6.2**	1. No change 2. Remove designated Great Sandy Area and prohibit all commercial netting from the Conservation Park zones within the Great Sandy Area waterways **3. Remove designated Great Sandy Area and prohibit only commercial netting with large mesh gill nets and ring nets from the Conservation Park zones within the Great Sandy Area waterways**
Theme: Protection of threatened species		
Improve the protection and potential for long term population recovery of threatened species and support state, national and international obligations.	*Shorebirds* Disturbance of shorebirds within the marine park impacting on the success of their recovery **Section 6.3.1**	1. No change **2. Apply park-wide provisions to protect shorebirds from disturbance** **3. Establish new designated area (Seasonal Shorebird Closure Area) that seasonally closes access to four highly significant roost sites (Moon Point, Maaroom, Boonooroo and Cooloola)**
	Grey Nurse Sharks Critically endangered grey nurse sharks in the Wolf Rock area are ranging more extensively than was originally understood and are not effectively protected from fishing-related injury and mortality by the extent of the existing Wolf Rock Marine National Park and Buffer zones **Section 6.3.2**	1. No change 2. Expand the Buffer zone and maintain extent of the existing Marine National Park zone **3. Expand the Marine National Park zone and remove the Buffer zone**
	Dugong, turtle and dolphin Use of some types of commercial fishing nets in core habitats for threatened species present a high risk of entanglement and mortality to a range of threatened species. **Section 6.3.3.2**	1. No change 2. Prohibit all commercial netting from the Conservation Park zones within the Great Sandy Area waterways 3. **Prohibit only commercial netting with large mesh gill nets and ring nets (which present the highest risk to threatened species) from the Conservation Park zones within the Great Sandy Area waterways**
	Dugong and turtle Core turtle and dugong habitat not effectively recognised and protected by the current zoning. **Section 6.3.3.3**	1. No change 2. Upgrade zoning adjacent to Mon Repos from Habitat Protection zone to Marine National Park zone **3. Upgrade the zoning adjacent to Mon Repos from Habitat Protection zone to Conservation Park zone** **4. Expand the size of two existing Marine National Park zones in southern/ central Hervey Bay to better protect seagrass and key turtle and dugong feeding and transit areas**

Objective	Problem	Options Considered (preferred option shown in bold that is included in the draft zoning plan)
	Turtle Existing designated Turtle Protection Area adjacent to the internationally significant Mon Repos nesting beach not adequately protecting inter-nesting turtles from interactions with trawlers. **Section 6.3.3.4**	1. No change 2. Replace the current designated Turtle Protection Area (that extends approximately 1.8km offshore) with a Habitat Protection zone that extends to approximately 5km offshore. **3. Extend the boundary of the current designated Turtle Protection Area from approximately 1.8km to approximately 5km offshore and retain the existing prohibition on trawling in this area from 1 November to 31 January**
	Dugong and turtle Existing network of Go Slow Areas is not providing adequate coverage of shallow, turtle and dugong habitats in high vessel traffic areas to protect these threatened species from vessel strike. **Section 6.3.3.5**	1. No change **2. Establish one new and expand eight existing Go Slow Areas, modify the Go Slow Area rules to prohibit motorised water sports within these areas, convert the existing Sandy Cape Go Slow Area to year-round and exempt surf life-saving activities along the Woongarra Coast from Go Slow Area rules.**
	Turtle Existing designated Mon Repos Area that prohibits vessels, swimming, and fishing on and adjacent to the Mon Repos turtle nesting beach between 6pm and 6am during the period 15 October and 30 April, to prevent disturbance of nesting turtles, does not provide adequate protection for the entire turtle nesting season **Section 6.3.3.6**	1. No change **2. Amend the provisions of the designated area to prohibit people from the designated area between 6pm and 6am unless they are part of a ranger-led tour and extend the duration of the designated area for an extra month to 31 May to better align with the nesting season**
Theme: Protection of cultural values		
Protect cultural values, respect native title rights and recognise the responsibilities of First Nations peoples to Care for Country	*Carland Creek* First Nations peoples concerned that vessel wash and noise are impacting on the cultural values of Carland Creek (southern end of Tin Can Inlet) **Section 6.4.2**	1. No change **2. Establish a Go Slow Area for natural and cultural values** 3. Rely on the proposed expansion of the Marine National Park zone in this waterway to reduce vessel use, as prohibition of fishing and collecting will likely reduce vessel activity in the waterway.
	Searys and Cooloola Creeks First Nations peoples concerned that vessel traffic and associated noise within Searys and Cooloola Creeks is impacting on the high cultural values of these waterways and interfering with the delivery of important cultural practices **Section 6.4.3**	1. No change **2. Establish a designated No Motorised Vessel Area that would prohibit the use of a motorised vessel or vehicle in the area** 3. Rely on the proposed expansion of the Marine National Park zone in this waterway to reduce vessel use, as prohibition of fishing and collecting will likely reduce vessel activity in the waterway.
	Designated Fish Trap Areas Five existing designated fish trap areas at Booral are not comprehensively protecting the fish traps and associated cultural values in this area **Section 6.4.4**	**1. Combine the five separate areas into one spatially defined area that encompasses all five existing Fish Trap Areas**

Objective	Problem	Options Considered (preferred option shown in bold that is included in the draft zoning plan)
Theme: Management of Platypus Bay to complement K'gari management		
Complement the management of the marine park with existing FHAs and adjoining National Parks and the K'gari (Fraser Island) World Heritage Area	Currently no management arrangements in the zoning plan to complement the adjacent national park management objectives for the remote, north-western coastline of the K'gari World Heritage Area and provide similar opportunities for peaceful enjoyment of the similarly remote adjoining area of Platypus Bay **Section 6.5**	1. No change 2. Establish a designated No Motorised Vessel Area in north-eastern Platypus Bay **3. Establish a new type of designated area to prohibit motorised watersports and the taking off and landing of fixed wing aircraft and helicopters in north-eastern Platypus Bay**
Theme: Coastal management and alignment with declared Fish Habitat Areas		
Enable authorisation and/or undertaking of works at various locations within the marine park to address a range of coastal management issues.	Current extent of Conservation Park zoning adjacent to urban areas is impacting on the delivery of coastal management works to; address the impacts of climate change (e.g. beach nourishment) and improve access at identified transport nodes. In some locations the Conservation Park zone also conflicts with declared Fish Habitat Area management and results in inconsistent management of private development between the two forms of marine protected area. **Section 6.6**	1. No change 2. Amend the 'entry or use with permission' provisions for Conservation Park zones **3. Implement a package of location specific zoning downgrades, modifications to management arrangements and amendments to declared Fish Habitat Areas**
Theme: Offence penalties and a range of other amendments		
Ensure maximum penalties for offences reflect the environmental consequences of the offence.	Several maximum penalties prescribed for zoning plan offences do not reflect the impact that the offence may cause on the natural or cultural values of the marine park and are low in comparison with penalty amounts for similar offences under other legislation. **Section 6.7**	1. No change **2. Increase maximum penalties for some offences**
Theme: Description of the marine park outer boundary		
Ensure the outer boundary is defined in such a way that the accuracy and understanding of the extent of the marine park is improved.	Current method of defining the outer boundary is based on reference to a low resolution statutory plan that; does not accurately reflect the extent and complexity of the tidal land and waters in various estuaries that were intended to be included within the marine park as per the original intent for declaration, is difficult to interpret from management and compliance perspectives and is inconsistent with the boundary description method used for the other State Marine parks. **Section 6.9**	**1. Redefine the outer boundary of the marine park using a contemporary written 'metes and bounds' description**
A range of other minor amendments to the zoning plan are also proposed to improve clarity, remove obsolete provisions, reduce unnecessary regulatory burden, improve complementarity with the management of other State marine parks and address flow on effects for other proposed zoning plan changes. **Section 6.8** Discussions regarding the inclusion/exclusion of the intertidal areas predominantly within the Great Sandy Strait, that are subject to exclusive native title rights determined under the Butchulla People Land and Sea Claim #2, and their level of protection, from the marine park, are currently underway with Butchulla Native Title Aboriginal Corporation (BNTAC).		

Recommendation

A zoning plan is required to conserve the marine environment within the Great Sandy Marine Park, and changes are required to the current zoning plan to improve its effectiveness in achieving the purpose of the Marine Parks Act. The draft zoning plan (which integrates the preferred approaches to address identified problems) is expected to improve the conservation of the marine environment, provide greater protection of threatened species, and enhance overall management of the marine park. It is expected to:

- Better protect a world class environment, featuring several iconic species including whales, dolphins, dugong, turtles, grey nurse shark and shorebirds – many at risk nationally and internationally, thereby protecting a draw card for visitation to the region.
- Better meet the aspirations and distinct cultural rights of First Nations peoples for the protection of cultural and natural values.
- Enhance the region's enviable nature-based and recreational fishing lifestyle.
- Support future economic growth of the region based on nature-based tourism, recreational, charter and sport fishing.
- Enable local government activities to address coastal impacts of climate change.
- Largely maintain use of the marine park by the commercial fishing sectors of trawl, crab, line but to a lesser extent net fishing.

Changes discussed in the RIS and reflected in the draft zoning plan include:

- expanding the MNP zone network to better protect the range of vulnerable and other habitat types and associated marine biodiversity, resulting in 12.8% of the total area of the marine park in MNP zones (the current total area is 3.9%)
- supporting the expanded MNP zone network by increases in the extent of Conservation Park (CP) and Habitat Protection (HP) zones to provide a comprehensive network of integrated zones throughout the marine park
- ensuring close to 30% of the marine park is included in highly protected MNP and CP zones, reflecting the emerging global targets for protected areas
- protecting 16% of the total area of all vulnerable habitat types and 10.6% of the total area of all other habitat types in MNP zones
- removing the designated Great Sandy Area that currently enables commercial netting to be undertaken in the CP zone of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, noting that bait netting and commercial tunnel net and set pocket net fishing, that poses less of a risk to threatened species, will continue in existing locations as non-conforming uses - this approach addresses current widespread conflict between fishing sectors, reduces entanglement risk to threatened species and seeks to maintain a supply of locally caught fish for human consumption and use as bait
- enhancing the protection of threatened species such as grey nurse shark, shorebirds, turtles and dugong by:
    - extending provisions that protect migratory shorebirds from intentional disturbance in the Great Sandy Strait to the entire marine park, and introducing additional seasonal access restrictions at four significant high tide roost sites
    - increasing the size of the MNP zone at Wolf Rock, the only known gestation site on the east coast of Australia for critically endangered grey nurse sharks, to reflect improved knowledge of how grey nurse sharks use the area's adjacent and connected habitats
    - expanding the network of Go Slow Areas for turtles and dugongs, and for the protection of areas of high cultural value to First Nations peoples
    - upgrading the zoning adjacent to the Mon Repos endangered loggerhead turtle nesting beach to a CP zone and expanding the size of the seasonal trawl closure area at Mon Repos to protect inter-nesting habitat for turtles.
- establishing areas where remote natural values can be enjoyed, and cultural values are protected, by prohibiting motorised water sports (e.g. water skiing) or motorised vessels
- enabling essential, well-planned shoreline management works to address coastal erosion issues exacerbated by climate change, by downgrading small areas of zoning adjacent to some developed coastal areas
- aligning marine park zone boundaries and declared FHA boundaries to provide more consistent management
- updating the description of the outer boundary of the marine park from its current plan-based definition to a contemporary written boundary description to improve accuracy, understanding and management of the marine park.

The preferred approaches to address problems with the current zoning plan offer the best solution while achieving the objectives of government action and the zoning plan review. The significant management changes proposed in

the draft zoning plan reflect these preferred approaches. A number of minor administrative and policy amendments will also be made to clarify, streamline and simplify regulatory requirements.

Impacts of implementing the recommendation

The significant management changes proposed in the draft zoning plan will result in broad positive impacts on the conservation of the natural and cultural values within the marine park and will improve management of specific threats to fauna, support ecosystem resilience and address a range of specific issues of concern to the public. However, these conservation initiatives will also result in some corresponding negative impacts on existing uses conducted within the marine park, particularly some of the extractive uses.

The recreational fishing sector will experience localised loss of access to some valued fishing grounds, particularly as a result of the expanded MNP zone network. However, it is expected that these localised impacts will be more than offset by the improved recreational fishery within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet that will result over time from the proposed prohibition of commercial netting with large mesh gill nets and ring nets within those waterways. The Government commitment to fund the construction of additional artificial reefs and boating infrastructure within the marine park, combined with the spill-over affect from the additional MNP zones that will occur over time for some species, will further enhance the recreational fishery within the marine park. Overall, it is predicted that the recreational fishery within the marine park will be significantly enhanced as an outcome of this zoning plan review.

Commercial fishers will be the most significantly and directly impacted stakeholder group from the changes proposed under the draft zoning plan. Overall impacts to the trawl, crab, line and harvest fishing sectors are predicted to be low to moderate and will primarily result from reduced access to fishing grounds from the expansion of the MNP zone network and changes to other zones. Impacts to the net fishing sector however, will be more significant. In addition to impacts from the broadscale zoning changes, the net fishing sector will be impacted by the proposed removal of the designated Great Sandy Area from the CP zones of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet and the resultant prohibition of the use of large mesh gill nets and ring nets within those waterways.

Overall, it is predicted that the proposed changes under the draft zoning plan may reduce the value of commercial catch taken from the marine park across all fisheries by $3-3.5m (GVP) per year, impact on 60-70 commercial fishing businesses to the extent that they may choose to exit the commercial fishing industry and directly affect up to 110 (assessed as totaling 50 full time equivalent) jobs in the commercial fishing sector. The significance of these impacts is recognised and the Government is committed to providing a fair and comprehensive commercial fishery impact mitigation package for affected commercial fishers. In addition, affected workers in the commercial fishing sector will be provided access to business support opportunities and grants along with retraining and employment support. Impacts to other users of the marine park from the proposed zoning plan changes are expected to be minor, with the nature-based tourism and charter sectors expected to become more secure as an outcome of the review.

Consultation

This Regulatory Impact Statement (RIS) follows consultation on a discussion paper that was released in January 2019. The purpose of the discussion paper was to seek public input on conservation and management opportunities for the Great Sandy Marine Park zoning plan and explore the feasibility and level of support for possible changes to the zoning plan. In general, feedback regarding the future management of the Great Sandy Marine Park indicated that significant and comprehensive improvements to the current zoning plan are required to better protect and conserve the biodiversity within the marine park from current and emerging threats.

Consistency with fundamental legislative principles

The options proposed under this impact analysis do not breach any fundamental legislative principles under the *Legislative Standards Act 1992*.

Implementation and evaluation strategy

A revised zoning plan for Great Sandy Marine Park will be developed following feedback on this RIS and is expected to commence in 2023. A delay in commencement following Government approval is required to allow for the implementation of an impact mitigation package, to be developed in consultation with industry, for commercial fishers and post-harvest sector businesses affected by zoning plan changes. Existing uses of the marine park that can currently occur ‘as-of-right’ or with permission will continue unchanged until the commencement date. For activities requiring permission, that do not currently require it, transitional provisions will be in place to allow time for reasonable adjustment to new requirements. The revised zoning plan will be subject to statutory review in line with legislative requirements for subordinate legislation.

2 Have your say on the proposed changes

As part of the Great Sandy Marine Park (GSMP) zoning plan review, the Queensland Government is seeking feedback from all interested parties on the changes proposed to the current zoning plan as outlined in this Consultation Regulatory Impact Statement (RIS). This document presents and analyses the potential costs and benefits (where known) of changes proposed to address a range of identified issues within the current zoning plan. It also presents and analyses alternative feasible options (where applicable) that have been considered in developing the preferred option to address problems. Complementary changes to 10 declared Fish Habitat Areas (FHAs), as well as the likely costs and benefits which might arise from adoption of these changes, are also presented for feedback in this RIS.

Feedback on proposals presented in this RIS will inform the preparation of a revised zoning plan for the GSMP and the revision of 10 declared FHAs. You are invited to provide feedback on this RIS by either:

1. Completing the online survey available at www.qld.gov.au/greatsandymarinepark; or

2. Preparing a written submission providing comment on issues relevant to the zoning plan review.

To ensure your submission is as effective as possible:

- Be clear and concise.
- Refer your points to specific sections of the RIS.
- Indicate your level of support for proposed changes - clearly state your reason/s if you disagree.
- Give sources of information where possible.
- Suggest alternatives for those aspects of the draft zoning plan with which you disagree.

Send written submissions to:

Great Sandy Marine Park zoning plan review

Marine Protected Area Policy

Department of Environment and Science

PO Box 15187, City East, Brisbane 4002 Queensland.

or

Email: gsmp.review@des.qld.gov.au

The closing date for providing submissions is midnight on

Sunday 23 October 2022.

Submissions sent by Australia Post must be postmarked by the closing date.

Personal information provided by way of online survey responses or written submissions will be collected by the Department of Environment and Science (the department) for the purpose of informing the Great Sandy Marine Park zoning plan review and the development of a final revised zoning plan for the marine park. The department may contact you for further information on the issues you raise in your submission or to notify you of the outcome of the zoning plan review. The data may also be used to inform future management initiatives for the marine park.

Information collected from online survey responses and written submissions will be provided to the Minister for the Environment and the Great Barrier Reef as per section 23 of the *Marine Parks Act 2004*. The information provided will only be used for these purposes. The department will not otherwise use or disclose your personal information unless you agree or the department is authorised or required by law to do so. Your personal information will be handled in accordance with the *Information Privacy Act 2009*. For additional privacy information go to: https://www.des.qld.gov.au/help/legal/privacy

3 Introduction

The Great Sandy Marine Park (GSMP), managed by the Department of Environment and Science (the department), is located in the Wide Bay-Burnett Region of Queensland, approximately 275km north of Brisbane. In 2020 the region had a resident population of approximately 300,000 with the main population centres being the cities of Hervey Bay, Bundaberg, and Maryborough. The marine park was established in 2006 and covers an area of approximately 6000 km^2. Extending from Baffle Creek in the north to Double Island Point in the south, the marine park includes the waters of Hervey Bay, Great Sandy Strait, Tin Can Inlet and the waters off the east coast of K'gari (Fraser Island), seaward to the extent of Queensland state waters (three nautical miles). It is an area of exceptional conservation value, surrounding the internationally significant K'gari (Fraser Island) World Heritage Area and encompassing the Great Sandy Strait, a Ramsar Wetland of International Significance. Eleven Fish Habitat Areas (FHAs), declared under the *Fisheries Act 1994* to protect habitat important for the State's fisheries from the impacts of coastal development, also occur within the GSMP.

The significant environmental and cultural values of the marine park include:

- a large double ended estuary (Great Sandy Strait), numerous smaller estuaries, a large bay (Hervey Bay) and exposed coastlines
- species of international and national conservation significance, including humpback whales, the grey nurse shark, marine turtles, dugong, the Australian humpback dolphin and migratory shorebirds
- the southernmost mainland fringing reefs in eastern Australia
- extensive seagrass, mangrove and saltmarsh communities
- areas of cultural and spiritual significance in the sea Country of the Bailai (Byellee), Gurang, Gooreng Gooreng, Taribelang Bunda, Butchulla and Kabi Kabi First Nations peoples.

Like all Queensland marine parks, it is a multiple use park established to support the long-term protection of the natural and cultural values of the area while providing opportunities for a wide range of activities, such as recreational and commercial fishing, charter fishing, boating, whale watching, research, coastal works, tourism, SCUBA diving and snorkelling. Fishing activities are discussed in detail in section 6.2 and section 7.

Management of the marine park is delivered through the *Marine Parks Act 2004* and associated subordinate legislation – the Marine Parks Regulation 2017, Marine Parks (Declaration) Regulation 2006 and the Marine Parks (Great Sandy) Zoning Plan 2017 (the GSMP zoning plan).

Marine park zoning plans provide a management framework that aims to achieve conservation of the marine environment while also seeking to balance the community's requirements for sustainable use of the area. Specifically, zoning plans should:

- Protect and conserve the biological diversity of ecosystems, habitats and species populations within an integrated network of zones and supporting designated areas.
- Protect threatened fauna and flora species and threatened habitat types.
- Deliver on-ground management actions to operationalise international conservation obligations and agreements (e.g. management of internationally recognised wetlands and threatened species).
- Provide opportunities for the ecologically sustainable use of, and access to, marine resources.
- Provide for a range of recreation, tourism, commercial and research activities.
- Protect heritage and cultural values and recognise and allow for the traditional use of marine resources by First Nations peoples.

Since 2006, the GSMP zoning plan has managed the marine park through:

- a network of spatially defined management zones, with all areas in the marine park allocated to one of five types of zone which afford different levels of protection and use (refer to the table below)
- nine categories of designated area that support management of particular values or uses at specific locations including:
    - turtle conservation measures at Mon Repos to protect nesting turtles by regulating access
    - vessel Go Slow Areas to reduce the risk of vessel strike to turtles and dugong
    - shorebird roosting and feeding areas to protect shorebirds from disturbance
    - the Great Sandy Area enabling various forms of licensed commercial fishing to occur in the Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet Conservation Park zones.
- entry or use provisions for each zone and designated area which state activities that are either as of right, require permission or are prohibited
- management arrangements to accommodate the continuation of specific uses in various zones that were in place and/or authorised at the time the park was declared (referred to as non-conforming uses)

- offence provisions and penalties for non-compliance with the requirements of the zoning plan
- accreditation of Traditional Use of Marine Resources Agreements developed by First Nations peoples to manage traditional hunting and gathering activities.

Management zones, protection and use

Current Zones within Great Sandy Marine Park
Marine National Park (green) zone – highly protected conservation area, "look but no take"
Buffer Zone (olive green) zone – highly protected conservation area, "look but no take", except allows for trolling for pelagic fish species
Conservation Park (yellow) zone – significant conservation area, limits fishing, crabbing and development of facilities and infrastructure
Habitat Protection (dark blue) zone – conservation area, allows recreational and commercial fishing except trawling and allows development of facilities and infrastructure
General Use (light blue) zone – least restrictive zone, allows recreational and commercial fishing including trawling and allows development of facilities and infrastructure

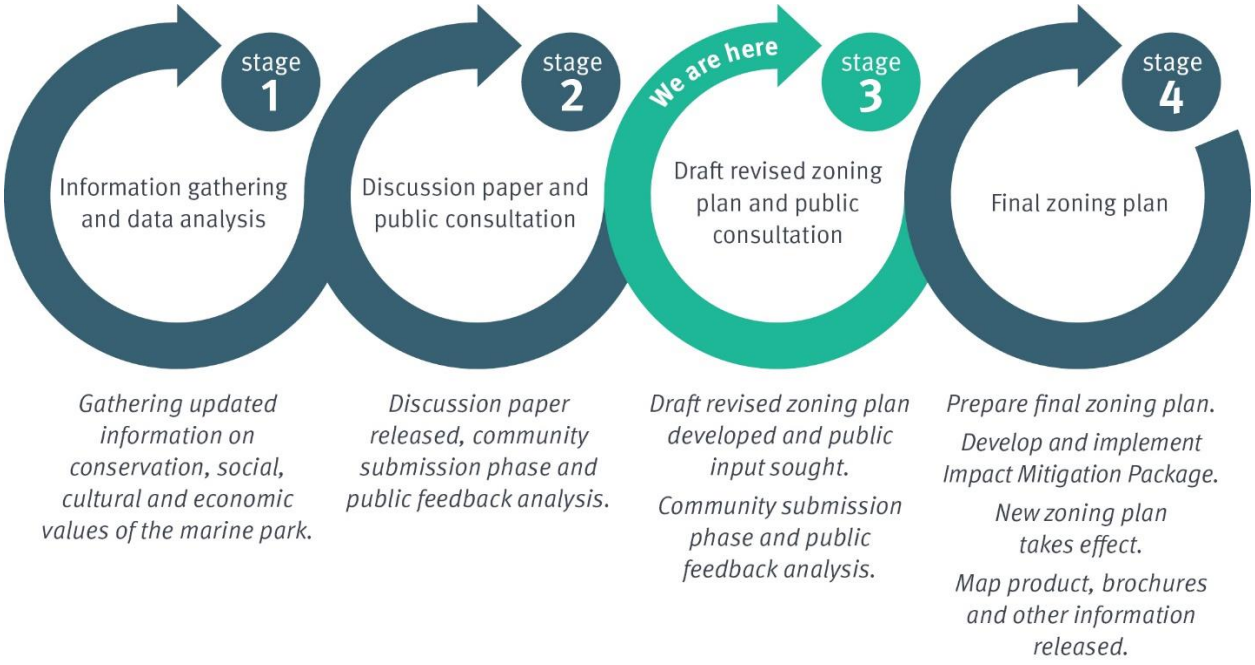
3.1 Rationale for the review

The *Statutory Instruments Act 1992* requires subordinate legislation to be reviewed every 10 years. As the first review of the zoning plan since the park was established, community, stakeholders, First Nations peoples and Government have an opportunity and obligation to identify problems and propose changes to improve the park's management to deliver the purpose of the *Marine Parks Act 2004* – being the conservation of the marine environment by:

- addressing emerging threats
- incorporating contemporary research information
- integrating park management with other legislative changes.

To allow time for a comprehensive review to be competed, the Marine Parks (Great Sandy) Zoning Plan 2006 was re-made with no material change in 2017.

Subsequent to this, the zoning plan review involves four key stages:



Key components of the review to date have included:

- engagement with First Nations peoples and consultation with stakeholder groups
- broad public consultation through the release of the *Great Sandy Marine Park Discussion Paper – zoning plan opportunities* in 2019 which generated 3,300 submissions
- establishment of an independent Scientific Reference Group (SRG) comprising experts (Appendix 1) from a range of disciplines including marine ecology, socio-economics, conservation biology, fisheries and coastal management, which developed a recommended suite of 10 biophysical and five socio-economic guiding principles (Appendix 2), provided input on the adequacy of the current zoning plan and proposed changes discussed in this Consultation RIS
- consideration of threats, contemporary scientific knowledge and best practice marine park management
- an analysis of the impact to commercial fisheries within the marine park of proposed zoning and management change options
- establishment of an Interdepartmental Working Group (IWG) comprising representatives from relevant Queensland Government departments to discuss and ensure changes proposed for inclusion in the draft zoning plan are optimised to achieve net benefits for Queensland. In this regard, the IWG also assists with the identification of initiatives to enhance economic activity in the Wide Bay-Burnett region including through the promotion of tourism based on the region's natural assets (including threatened species) and activities associated with recreational fishing.

This Consultation RIS and associated draft zoning plan is released for public comment as part of stage three of the zoning plan review process. The zoning plan will be finalised and implemented during stage four, following consideration of feedback received on this RIS.

4 Public consultation to date

Formal public consultation has occurred in the review process at the following two key stages to date:

- during the statutory remake of the Great Sandy Marine Park Zoning Plan in 2017
- through the release of the *Great Sandy Marine Park Discussion Paper – Zoning plan opportunities* (the Discussion Paper) in January 2019, that sought feedback on a range of management suggestions to support the ongoing ability of the zoning plan to balance conservation and use. The Department of Environment and Science (the department) received over 3,300 submissions, including approximately 60 from organisations such as community progress associations, environmental groups, local businesses and industry bodies.

Proposed changes presented in this RIS aim to address key management issues identified through increased knowledge and understanding of the values of the marine park and those raised in feedback from the two stages described above plus ongoing consultation, discussions and feedback from First Nations peoples, the SRG, key stakeholders including conservation groups, commercial and recreational fishing representatives, local government, special interest groups, and other government departments.

Collaboration with First Nations peoples in the region is a priority for the department in the development of a draft zoning plan for the marine park, to ensure, as far as practicable, that the final revised zoning plan protects and conserves cultural values, respects native title rights and interests, respects traditional knowledge and integrates and supports the aspirations and distinct cultural rights of First Nations peoples for sea Country within the marine park. Aspirations and interests of First Nations peoples have ranged from additional provisions in the zoning plan to protect and support the management of cultural values, improved mapping of cultural heritage resources through to increased partnership and involvement in research, education and management activities.

Feedback to date regarding the future management of the Great Sandy Marine Park has been mixed, but in general indicates that the current management arrangements require considerable update or change to meet the expectations of the community, stakeholders and First Nations peoples. Identified changes to the current management generally fall within the following broad categories:

- Protection and conservation of habitats and species from current and emerging threats.
- Facilitation of management responses to climate change impacts especially in relation to shoreline management and the provision and protection of public infrastructure.
- Expansion of the Marine National Park zone network.
- Resolution of conflict between fishing sectors in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (the waterways within the designated Great Sandy Area), in relation to commercial net fishing being allowed to be conducted in the Conservation Park zones within these waterways.

- Management of commercial trawling and crabbing.
- Protection and integration of First Nations peoples' rights, cultural values and aspirations for country.

5 Objectives

In consideration of increased knowledge and understanding of the values of the marine park, public feedback, First Nations peoples' input, the guiding principles recommended by the SRG and government priorities, a range of problems have been identified with the current zoning plan. These are discussed in section 6. To address these problems the proposed changes to the zoning plan discussed in this RIS seek to:

- Improve the current network of zones to better reflect global biodiversity targets, meet contemporary marine protected area management principles for habitat protection and deliver an integrated zoning framework to balance conservation and use of the marine park.
- Address specific threats to habitat quality, integrity and management in various locations throughout the marine park.
- Address conflict between fishing sectors in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (the designated Great Sandy Area).
- Improve the protection and potential for long-term population recovery of threatened species and support state, national and international obligations.
- Complement the management of the marine park with existing declared FHAs and adjoining National Parks and the K'gari (Fraser Island) World Heritage Area.
- Protect cultural values, respect native title rights and recognise the responsibilities of First Nations peoples to Care for Country.
- Enable authorisation and/or undertaking of works at various locations within the marine park to address a range of coastal management issues.
- Ensure maximum penalties for offences reflect the environmental consequences of the offence.
- Ensure the outer boundary is defined in such a way that the accuracy and understanding of the extent of the marine park is improved.

The draft zoning plan presented in this RIS, aims to provide a legislative framework to meet the purpose of the *Marine Parks Act 2004*, the objectives listed above and to ensure developments proposed and activities that occur within the multiple use marine park are ecologically sustainable and do not lead to unacceptable loss of environmental quality.

6 The need for change

A number of problems have been identified with the current zoning plan based on government priorities, recommendations of the SRG and feedback received to date from First Nations peoples, stakeholders and the public. Many of these problems are not mutually exclusive and require a holistic response to achieve the best outcomes for the marine park and its users. The problems and potential options for addressing them, including the preferred approach, are set out under a number of key themes. Sometimes a single solution can solve multiple problems and conversely, a single problem may require multiple solutions. Therefore, these themes should not be read in isolation.

The key problems and potential options to address these are outlined in this section of the RIS under the following main themes:

- Habitat protection (section 6.1)
- Conflict in the waterways of the designated Great Sandy Area (section 6.2)
- Protection of threatened species (section 6.3)
- Protection of cultural and amenity values (sections 6.4 and 6.5)
- Coastal management and alignment with declared Fish Habitat Areas (section 6.6)
- Offence penalties and a range of other amendments (sections 6.7 and 6.8)
- The description of the marine park outer boundary (section 6.9).

Options to address these problems generally require a regulatory change and/or will have a regulatory impact. For some problems, multiple options have been presented and an impact analysis compares the costs and benefits to the existing management situation (i.e. the management arrangements that apply under the current zoning plan). These impact analyses are both qualitative and quantitative (where data is available) in relation to environmental and socio-economic costs and benefits and consider effects on the environment, business and industry, the community and government. See Notes 1 and 2 below for limitations in assessing costs to industry and government. A bibliography (section 10) and appendices provide further information and material on information

presented and/or referenced.

Non-regulatory changes, such as attempting to achieve the desired objectives through improved public education programs, have been considered at a broad scale, with an assessment of the costs, benefits and feasibility of improved public education programs to achieve the desired outcomes listed in section 5, provided below.

Education as a management approach to achieve objectives

Research has demonstrated a link between broad community support for marine protected areas, such as marine parks, and successful conservation outcomes through community education. Public education programs can assist to build awareness and knowledge of marine park values and the regulatory arrangements that serve to protect these values, often leading to constructive changes in behaviour and acceptance of, and support for, the marine protected area and associated management objectives. For any public education and awareness program to be successful, the right stakeholder group/s must be targeted to provide them with sufficient information to make well informed choices regarding behaviour. A key objective of long-term investments in education programs is to encourage and improve voluntary compliance with existing and new regulations.

Since the marine park was established, the Department of Environment and Science (the department) has employed a variety of techniques to educate and inform the public about the values of the marine park and the associated regulations including installation of regulatory and interpretative signage at numerous locations throughout the marine park, production of hardcopy and electronic advisory material, and personal interactions with the public at schools, community events (e.g. boat shows) and during patrols, at a cost of approximately $85,000 annually. Targeted education campaigns are also conducted at specific times of the year (e.g. arrival of migratory shorebirds) or on individual management issues such as the need to comply with Go Slow Area provisions to reduce the incidence of vessel strike on turtles and dugongs.

However, the public is often more receptive to some messages about environmental issues than others, for a wide variety of reasons, which reduces the efficacy of education initiatives, irrespective of the amount of resources applied. For instance, shorebirds are not typically as charismatic and obvious as some other marine species that occur in the marine park such as whales and dolphins, and it can be challenging to evoke a sense of empathy and understanding at a level that will result in a change in behaviour to reduce shorebird disturbance, without a regulatory basis to drive behavioural change.

Key education messages delivered by the department to date have focussed on:

- impacts of disturbance to shorebirds
- approach distances to marine mammals
- locations of Marine National Park zones as no fishing areas
- the need for Go Slow Areas to protect vulnerable species such as turtles and dugongs from vessel strike
- protection of sensitive habitats such as corals and seagrass from activities such as anchoring.

Despite the investment in public education and the risk of fines for non-compliance with regulations there are still members of the community who do to not heed the advice and information provided, resulting in behaviours that compromise the integrity of marine park values such as continued disturbance to shorebirds, vessel operation that can injure turtles and dugong and fishing in Marine National Park zones. Providing information to educate the public on the risks to threatened species and the ecological and cultural values of the marine park therefore needs to be supported by appropriate regulatory mechanisms to ensure changes in behaviour that reduce threats to these values.

Behaviour change campaigns require consistent and ongoing resourcing to deliver regular reminders of key messages to be effective and can take a long period of time to occur for the change to be observed, during which time the damaging behaviour or activities continue. The production of advisory material to suit a large range of target audiences distributed over a large geographic area and whose experience and interaction with the marine park differs would be expected to exceed the resources required to achieve a change in behaviour based on a combination of education and enforcement of a regulatory framework. Combination with regulatory mechanisms is expected to expedite changes in behaviour.

For the reasons discussed above, an individual assessment of the feasibility of relying on education alone as an option to address the various problems discussed in this section is not included.

Note 1: Assessing costs to industry (commercial fisheries)

Attempting to precisely quantify the costs to the commercial fishing sector associated with the individual zoning or management change options presented in this section, in terms of impacts on catch, number of fishing businesses affected and job losses, particularly in advance of the consultation that this RIS will enable, is complex and

potentially fraught.

This complexity primarily stems from the limited resolution of available commercial fishery catch and effort data, relative to the scale of many of the zoning changes that are discussed. Commercial fishery data is reported at a relatively coarse geographic scale, with grid sites (each covering an area of approximately 11km x 11km) being the finest available resolution. The scale of these grid sites was developed to inform broadscale assessment of fish stock and fisheries management, rather than to support fine scale marine park management decisions. As commercial fishing typically does not occur uniformly across a grid site and the various individual marine park change options presented in this section rarely align exactly with grid site boundaries, detailed local knowledge of the location specific fishing practices (generally only held by the fishers themselves) is required to accurately proportion the catch and effort within part of a particular grid site that would be impacted by a proposed zoning change option.

In addition to these data resolution complexities, assessing the impact to commercial fishing businesses and jobs resulting from individual change options in isolation, does not recognise or reflect the complex and cumulative impacts that may occur as a result of the implementation of multiple changes discussed in this section. Assessment of potential cumulative impacts is particularly complicated as individual commercial fishers are often licenced to operate within multiple fisheries. As such, flow-on affects resulting from a proposed change may manifest in other fisheries that are not directly impacted by the change, as a result of fishers transferring their effort into the other fisheries within which they are licenced to operate.

Due to these factors a quantitative assessment of commercial fishery impacts for the individual change options presented in section 6 is not provided. Rather, an assessment of the impact to each commercial fishing sector, in terms of lost catch from the combined suite of preferred zoning changes is presented in section 7.2.1 – 7.2.5 and an estimate of the overall impact (on catch, businesses and jobs) from this package of changes on the combined commercial fisheries conducted within the marine park is presented in section 7.2.6. The Government commitment to provide a fair and comprehensive commercial fishery impact mitigation package to address these impacts is also discussed in section 7.2.6.

Note 2: Assessing the costs to government to enforce proposed changes
Where changes proposed in section 6 require a cost to government to enforce the new or expanded regulatory framework, an estimate of the cost at the scale of the individual change has been provided. However, at this scale, these costs assume that labour resources and assets (e.g. vehicles and vessels) are in place and hence only indicate the operational costs involved (i.e. fuel, staff time, allowances).

Conversely, section 8.2 reflects an overall estimate of the cost to government to enforce the package of preferred changes at a park wide scale. This includes costs associated with employing additional staff, acquiring additional assets and takes into account efficiencies in operational activities (and hence reductions in cost) resulting from the ability to combine enforcement tasks at the same location (e.g. MNP zone and a Go Slow Area).

6.1 Habitat Protection

6.1.1 Habitat representation and an integrated zoning framework

The marine environment is a complex and diverse system in which every species plays a part in maintaining the ecological functions of the environment. Biodiverse environments provide a wide range of goods (e.g. food, medicine, raw materials) and services (e.g. nutrient cycling, climate regulation, flood and storm protection, cultural heritage and identity) that sustain human life. Losses of biodiversity affect the productivity of ecosystems and weaken their resilience to natural disasters and human-caused stressors. If biodiversity is not effectively protected from threatening processes, opportunities for cultural, recreational and commercial activities can be diminished.

Globally, marine biodiversity is under threat from a range of factors including climate change, population growth, pollution and increasing use. To address the escalating loss of this biodiversity and increasing threats to species and ecosystems, the United Nations Convention on Biological Diversity (CBD) came into force in 1993 to protect biodiversity for future generations. The CBD has been ratified by the overwhelming majority of countries (196 Parties) including Australia, and is a legally binding commitment to conserve biodiversity, use its components in a sustainable manner, and equitably share benefits arising from its genetic resources. The Convention offers guidance on the use of the precautionary principle - to ensure measures are taken to avoid or minimise a threat of significant reduction or loss of biodiversity despite a lack of full scientific certainty. Long-term targets are set under a global biodiversity framework, which are adopted at a global level and these targets provide guidance for setting national targets. The current global biodiversity protection targets, set in 2010, aim to "*conserve at least 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services,*

through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, by 2020".

Given ongoing biodiversity loss, a CBD post-2020 global biodiversity framework has been drafted which describes 21 action-oriented targets for urgent action over the decade to 2030 including a protected area-focused target that "*at least 30% of …coastal and marine areas, are effectively and equitably governed, protected and conserved with a focus on sites of particular importance for biodiversity, in well-connected systems of protected areas and other effective area-based conservation measures by 2030…".* At the September 2021 International Union for the Conservation of Nature (IUCN) World Conservation Congress, participants passed a resolution supporting the CBD draft framework including the target to protect and conserve at least 30% of terrestrial and marine areas. Membership of the IUCN is composed of over 1,400 government and civil society organisations from around the world and draws on the knowledge of over 18,000 experts. More recently, global governments advanced negotiations on the draft framework and reaffirmed the draft goals, however, decided further work is required to refine the framework. Work will be progressed in the lead up to further discussions at the UN Biodiversity Conference later this year.

Protecting representative areas of all habitat types within marine protected areas is a well-established and precautionary approach to implementing these CBD targets and marine conservation generally. This approach recognises that there is often incomplete knowledge of the habitat requirements of the many thousands of marine species, however by protecting representative areas of each known habitat type, it is assumed that the diversity of species inhabiting the area will also be protected. Habitat types can be mapped and used as the basis to maximise the conservation of biodiversity if a proportion of all mapped habitats are represented in highly protected areas such as Marine National Park (MNP) zones.

This concept underpins the basis of Australian and international best practice management principles for habitat and biodiversity protection in marine parks. These principles aim for a MNP zone network to be:

- **Comprehensive (C)**: ensures that the full range of habitat types (and other biodiversity features like species) found in the marine park are recognised at an appropriate scale and included in the MNP zone network
- **Adequate (A)**: ensures that enough area of a specific habitat type is protected to maintain the ecological viability and integrity of populations, species and communities and that natural processes will persist through time
- **Representative (R)**: ensures that the examples of the variety of marine biodiversity at all levels within the marine park e.g. genetic, species, habitat diversity as well as rare and threatened ecological communities / species and atypical areas e.g. spawning areas, nursery sites or breeding locations are included in the MNP zone network
- **Efficient (E)**: ensures that the above principles are met whilst minimising impacts and costs to marine park users.

These are known as the CARE principles and informed the zoning plan reviews of the Great Barrier Reef and Moreton Bay Marine Parks and form the basis of the recommended guiding principles developed by the Scientific Reference Group (SRG) for the Great Sandy Marine Park (GSMP) zoning plan review (Appendix 2).

The SRG guiding principles integrate the CARE principles, the post-2020 CBD global biodiversity targets and a range of other marine protected area planning principles. From a habitat representation perspective, the SRG recommends at least 30% of the area of each vulnerable habitat type within the marine park should be protected within MNP zones. The guiding principles also state that unique habitats, or those critical to threatened species, potentially require greater protection. Vulnerable habitat types are typically those that are easily disturbed or transformed by human actions and are slow to recover after disturbance. For the GSMP, the SRG has identified saltmarsh, mangroves, seagrass, coral, subtidal gardens, gastropod reefs, coffee rock, and deep holes and gutters as vulnerable. The SRG's guiding principles also recommend a minimum of 10% of the area of each remaining habitat type should be included in MNP zones, and that these zones are supported with complementary zoning, designated areas and other integrated management arrangements that address specific threats and protect values within the marine park. Further references to representation in this document will be in relation to the SRG's recommendations for vulnerable and other (non-vulnerable) habitat types as described in this paragraph.

An indicative habitat map for the marine park has been developed to inform the review of the zoning plan, in particular the assessment of adequacy of the MNP zone network in relation to the CARE principles and SRG recommendations. Habitat types were classified by applying the Queensland intertidal and subtidal ecosystem classification scheme (DES, 2020) and based on the intertidal and subtidal ecosystem types of Central Queensland. Approximately 80 different biophysical data sources informed the identification of the 23 habitat types

shown in Appendix 3. Habitat mapping at this scale was unavailable for the initial zoning of the marine park.

Under the existing zoning arrangements, several habitat types are significantly under-represented in the MNP zone network in relation to the SRG recommended targets for habitat protection (see list below). A range of important ecological functions are provided by these habitats including carbon sequestration (e.g. seagrass beds), a food source for threatened species such as turtle and dugong (e.g. seagrass beds and associated fauna), feeding and roosting sites for migratory shorebirds (e.g. claypans, mudflats and intertidal seagrass beds) and climate change refugia for shallow water corals (e.g. deep holes and gutters).

Vulnerable habitats

- intertidal corals (28%)
- subtidal corals (26%)
- saltmarsh (15%)
- mangroves (12%)
- intertidal and shallow subtidal seagrass (8%)
- subtidal gardens (3%)
- deep subtidal seagrass (0%)
- gastropod reefs (0%)
- coffee rock (0%)

Non-vulnerable habitats

- high energy rocky headlands and platforms (9%)
- claypans and mudflats (5%)
- low energy subtidal mud, sand or gravel (5%)
- low energy sandy beaches and bars (4%)
- gravelly shores (4%)
- high energy subtidal sand or gravel (4%)
- calcareous platform (3%)
- high energy sandy beaches (0%)
- deep holes and gutters (unconsolidated) (0%)

Other key recommendations of the SRG:

- Ensure that each habitat type is protected in more than one MNP zone to account for 'within habitat type' variation (e.g. not all seagrass beds or coral reefs are the same).
- Support habitat resilience (e.g. as a precaution against climate change impacts or major localised damage) with a size that minimises edge effects and incorporates a mosaic of habitats, and placed to maximise connectivity.

While about a quarter of the mapped habitat types are currently replicated in 10 or more MNP zones within the marine park, many of these zones, or the area of habitat represented within each zone, are small. Four habitat types each occur only once in the MNP zone network (high energy rocky headlands/platforms, high energy sandy bars, deep holes and gutters consolidated and unconsolidated) and four are not represented in any MNP zones (deep subtidal seagrass, gastropod reefs, coffee rock, high energy sandy beaches).

Ten of the current MNP zones are in the central section of the marine park and the greatest distance between these zones is up to 39km, highlighting the need for improved connectivity across the MNP zone network. Only 5% of the marine park that adjoins national parks (including the K'gari (Fraser Island) World Heritage Area) is protected in MNP zones. Improved integration of highly protected marine and terrestrial areas can aid the effectiveness and resilience of these areas, promote the health and recovery of disturbed ecosystems, influence dispersal and movement of populations and the distribution and composition of species' assemblages. Areas of the marine park that adjoin and receive flows from freshwater are also relatively under-represented within the MNP zone network.

The current total of 3.9% of GSMP protected in the MNP zone is well below existing and proposed international and SRG habitat representation targets and does not meet CARE principles or community expectations for a well-managed marine park. In comparison, 16% of Moreton Bay Marine Park and 33% of the Great Barrier Reef Marine Park are included in MNP zones. In other jurisdictions with large, multiple use marine parks similar to Queensland, the percentage of marine park in zones equivalent to MNP zones range from 12 to 27.5% in NSW and 11 to 24% in Western Australia.

The value of other zones to support the network of MNP zones and provide varying levels of protection, especially to vulnerable habitats, is recognised by the SRG's guiding principles. Conservation Park (CP) zones deliver conservation benefits and a balance between social, environmental and economic factors by safeguarding important habitats and allowing multiple uses to continue. These partially protected areas play a significant role in minimising impacts to habitat values by prohibiting trawling and other types of commercial fishing which allows marine resources to be retained in the system. CP zones also significantly constrain coastal development impacts. In combination, MNP and CP zones currently include approximately 18% of the area of the marine park. In comparison, these zones account for approximately 23% of Moreton Bay Marine Park. Habitat Protection (HP) zones, to the extent that they remove a significant direct and extensive threat of disturbance to soft bottom habitats including vulnerable seagrass meadows by prohibiting trawling, buffer MNP and CP zones and minimise edge effects.

Consultation feedback to date

Key feedback and suggestions to date:

- Ensure that a proportion (at least 10%) of each habitat type found in the marine park is protected in a MNP

zone, especially coral and seagrass.
- Apply best practice reserve design principles including appropriate size and spacing, replication, and placement to promote ecosystem connectivity.
- Provide refugia for species being impacted by climate change through increasing the area of MNP zones.
- Introduce new MNP zones at certain locations in the marine park, including around the ex-HMAS Tobruk, and along the foreshore between Moon Point and Black Creek on K'gari (Fraser Island).
- Reduce the number of MNP zones to allow greater access for recreational fishing.
- Strong opposition to establishing a MNP zone in Baffle Creek.
- Mixed views about introducing No Anchoring Areas rather than MNP zones to protect coral at various locations, including Four Mile Reef.
- Strong support for the removal of the non-conforming use of beam trawling in the Mary River.

The problem

The current zoning arrangement, that is not based on the CARE principles nor meets global biodiversity conservation targets or SRG recommendations for MNP zones, places the marine park's biodiversity at risk. In particular, the current zoning:

- incorporates only 3.9% of the area of the marine park in MNP zones which is well below recommended levels for biodiversity conservation
- does not represent and/or appropriately replicate and connect all habitat types in MNP zones
- constrains the ability to mitigate threats from, and build resilience to, climate change and other stressors to improve the quality and integrity of habitats
- compromises the maintenance or improvement of the essential goods and services that biodiversity provides to humans.

A range of options are considered below to address the habitat protection problems with the current zoning plan. These options are all based on increasing the extent of all habitat types in MNP zones in order to meet global biodiversity conservation targets based on CARE principles. Other options, such as monitoring habitats for evidence of degradation prior to considering increased protections, are not considered feasible as they would not comply with the United Nations Convention on Biological Diversity and would risk irreversible degradation of marine park values.

6.1.1.1 Option 1 – No change to the current zoning

This option would maintain the existing zoning plan arrangements. There would be no changes made to the network of MNP zones (currently 3.9% of the marine park) or the arrangement of other zones, which would not address the problem identified. Currently 18.3% of the marine park is included in MNP zone, Buffer zone and CP zone. This option is the base case against which options 2, 3 and 4 are assessed.

6.1.1.2 Option 2 – Change zoning to include 8.3% of the area of the marine park in MNP zones

Option 2 reflects a suggested zoning enhancement proposal made in response to the discussion paper by a 'consortium' of key stakeholder groups including representative bodies of conservation groups and recreational fishers, a First Nations group, and various other marine park user groups. This proposal is based on recommendations to expand several MNP zones to improve representative coverage of critical habitats and some recommendations about other zones in specific places.

Option 2 (see Figure 1) includes the establishment of two new MNP zones (one located in offshore waters east of K'gari and the other to encompass the site where the ex-HMAS Tobruk was scuttled), and the expansion of two existing MNP zones (one in western Hervey Bay and the other within Searys Creek in Tin Can Inlet). This option proposes changes to address the under-representation of deep subtidal seagrass in MNP zones in the marine park by expanding the existing MNP zone in western Hervey Bay to increase protection of shallow and deep subtidal seagrass that is critical habitat for turtles and dugong, and a nursery ground for fish. As the area surrounding the wreck of the ex-HMAS Tobruk also contains deep subtidal seagrass habitat, the proposed new MNP zone in that location would also assist in meeting the representative target for this habitat type. The proposed new MNP zone to the east of K'gari would increase representation of high energy subtidal sand/gravel habitat and its boundary alignment aims to minimise economic and social impacts on the trawl fishery.

An expansion to the MNP zone at Searys Creek would more comprehensively protect all habitats within this creek system, and at Wolf Rock an expansion of the Buffer zone would assist in the protection of connected grey nurse shark habitat between Double Island Point and Wolf Rock as currently the MNP and Buffer zone configuration around Wolf Rock does not adequately protect known habitats or remove threatening processes critical for the

recovery of grey nurse sharks (see section 6.3.2.3). Buffer zones prohibit all forms of recreational and commercial fishing other than trolling for pelagic species. Option 2 also proposes a CP zone to support and reduce edge effects on the proposed MNP zone around the ex-HMAS Tobruk in central Hervey Bay. When combined with the existing and proposed MNP, CP and Buffer zones, this option would enable 23.8% of the marine park to be included in highly protected zones.

Option 2 would include representation of 20 out of the 23 habitat types in MNP zones. Two vulnerable habitats - the rare gastropod reefs and coffee rock, and one non-vulnerable habitat, high energy sandy beaches, would not be represented in any MNP zone. Representation of only one of the four habitat types that currently each occur only once in MNP zones would be marginally improved. Only 0.2% of the total area of deep holes and gutters (unconsolidated) is currently included in a MNP zone and this would increase to 0.3% in two MNP zones under this option.

Various vulnerable habitats would be under-represented in Option 2 including saltmarsh, mangroves, seagrass, intertidal and subtidal corals, and subtidal gardens. While this option would result in better representation of the vulnerable deep subtidal seagrass habitat (not currently represented in any MNP zones) at 11%, this level of representation is still well below the SRG's recommended target of 30%. Several of the remaining vulnerable habitat types would be better represented but representation of most vulnerable habitat types (9 out of 10) would not meet the SRG's recommended target of 30% in MNP zones. This is particularly the case for subtidal gardens, which are significantly under-represented at 3%.

Under Option 2, nine non-vulnerable habitats would not meet the SRG's recommendation to represent 10% of the area of each non-vulnerable habitat type in the MNP zone network. In comparison to the existing zoning plan, Option 2 would not greatly improve representation of these non-vulnerable habitats.

Table 1 lists the existing and Option 2 representation of each habitat type in each zone type, and the total percentage of marine park in each zone type. Figure 2 compares the percentage of each of the ten vulnerable habitat types included in each zone type between the existing zoning plan and zoning proposed under Option 2.

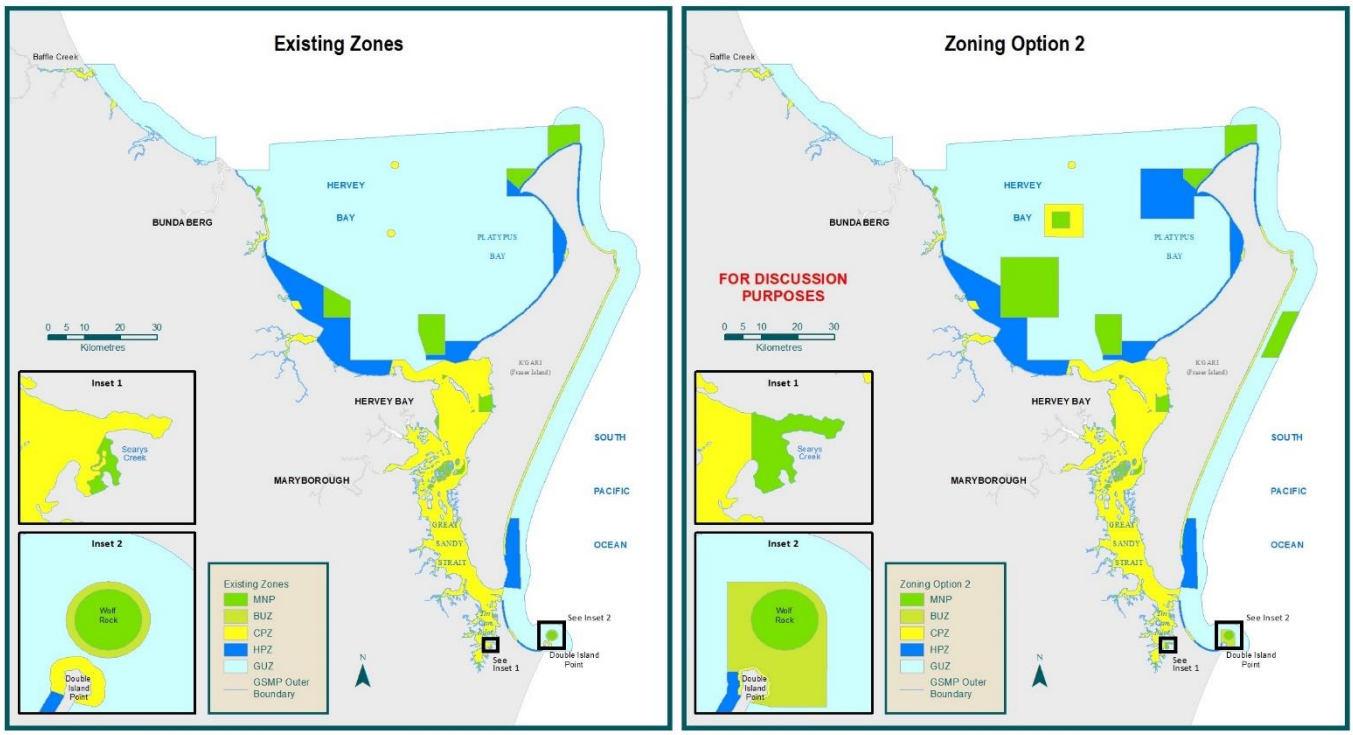


Figure 1. Great Sandy Marine Park existing zoning map (left) and Option 2 zoning map (right).

Option 2 would result in 8.3% of the area of the marine park in MNP zones compared with 3.9% currently. The proposed changes under this option include:

- an increase in the area of Buffer zones from 0.04% to 0.17%
- an increase in the area of CP zones from 14.4% to 15.4%
- an increase in the area of HP zones from 7.6% to 10.2%
- a decrease in the area of GU zones from 74.1% to 66%.

Table 1: Existing Great Sandy Marine Park zoning plan habitat representation and habitat representation for changes proposed under Option 2 for Marine National Park (MNP), Buffer (BU), Conservation Park (CP), Habitat Protection (HP), and General Use (GU) zones. Values are shown as percentages of the whole marine park.

		MNP		BUZ		CPZ		HPZ		GUZ	
Code	**Marine Park Habitat type**	**Existing**	**Option 2**	**Existing**	**Option 2**	**Existing**	**Option 2**	**Existing**	**Option 2**	**Existing**	**Option 2**
1	Saltmarsh	15%	16%	0%	0%	84%	82%	0%	0%	1%	1%
2	Mangroves	12%	12%	0%	0%	84%	84%	0%	0%	4%	4%
3	Intertidal and shallow subtidal seagrass	8%	13%	0%	0%	11%	11%	25%	25%	56%	50%
4	Deep subtidal seagrass	0%	11%	0%	0%	0%	4%	0%	7%	99%	78%
5	Intertidal corals	28%	28%	0%	0%	56%	56%	16%	16%	0%	0%
6	Subtidal corals	26%	26%	0%	0%	45%	45%	16%	16%	13%	13%
7	Subtidal gardens	3%	3%	0%	0%	50%	50%	0%	0%	47%	47%
8	Gastropod reefs	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%
9	High energy rocky headlands and platforms	9%	9%	0%	3%	73%	70%	18%	18%	0%	0%
10	Low energy rocky shores and bars	10%	10%	0%	0%	84%	84%	0%	0%	6%	6%
11	Boulder dominated rocky shores	17%	17%	0%	0%	37%	37%	34%	34%	12%	12%
12	Subtidal rocky reef	18%	18%	0%	6%	28%	22%	3%	3%	52%	52%
13	Calcareous platform	3%	3%	0%	0%	40%	40%	13%	13%	45%	45%
14	Coffee rock	0%	0%	0%	0%	41%	41%	56%	56%	3%	3%
15	High energy sandy beaches	0%	0%	0%	0%	59%	59%	14%	14%	26%	26%
16	High energy sandy bars	13%	13%	0%	0%	3%	3%	31%	31%	53%	53%
17	Low energy sandy beaches and bars	4%	4%	0%	0%	73%	73%	18%	18%	5%	5%
18	Claypans and mudflats	5%	6%	0%	0%	91%	90%	1%	1%	3%	3%
19	Gravelly shores	4%	4%	0%	0%	91%	91%	3%	3%	3%	3%
20	Low energy subtidal mud, sand or gravel	5%	5%	0%	0%	19%	19%	6%	9%	70%	67%
21	High energy subtidal sand or gravel	4%	8%	0%	1%	3%	3%	5%	5%	88%	83%
22	Deep holes & gutters (unconsolidated)	0.2%	0.3%	0%	0%	3%	8%	0%	11%	97%	80%
23	Deep holes & gutters (consolidated)	34%	34%	19%	19%	0%	3%	0%	0%	48%	45%
		3.9%	8.3%	0.04%	0.17%	14.4%	15.4%	7.6%	10.2%	74.1%	66.0%

* Vulnerable habitat types

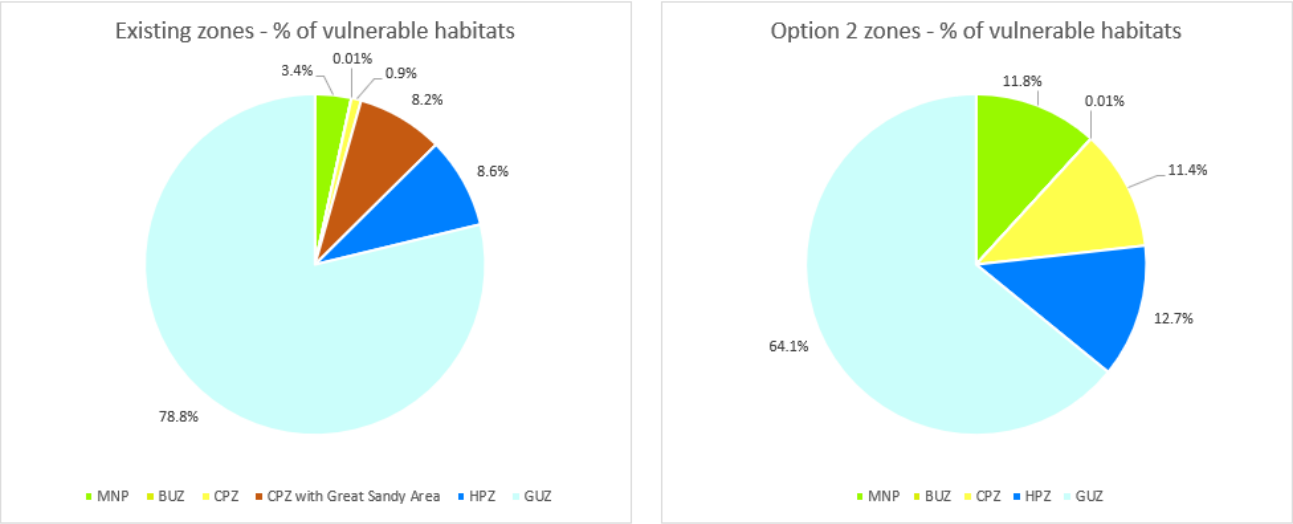


Figure 2. Percentage of the ten vulnerable habitat types of the Great Sandy Marine Park incorporated in each zone type in the current zoning plan (left) and Option 2 (right).

Potential benefits

- Some improvement in overall habitat representation with an increase from 3.9% to 8.3% of the marine park in MNP zones. The increase in habitats included in MNP zones would assist in improving conservation outcomes for biodiversity including threatened species.
- Increased representation of five habitat types (saltmarsh, intertidal and shallow subtidal seagrass, deep subtidal seagrass, claypans and mudflats, high energy subtidal sand/gravel), including three vulnerable habitat types, in MNP zones which aids their resilience to climate change and disturbance.
- The two new and expanded MNP zones would add approximately 269km^2 to the MNP zone network and include protection of vulnerable deep subtidal seagrass which is not represented in the existing MNP zone network.
- Improvement in the representation of deep subtidal seagrass from 0% to 11% would ensure some of this vulnerable habitat is protected from disturbance.
- An increase of 5% in the area of intertidal and shallow subtidal seagrass habitat in MNP zones would protect a greater area of important habitat for threatened species such as turtle and dugong.
- The proposed expanded HP zone to the north of Platypus Bay off Rooney Point would prohibit trawling from this area of the marine park, thereby protecting habitats from the physical disturbance associated with this fishing method.

Potential costs

- The new and expanded MNP zones, CP zone and HP zone within Hervey Bay would impact on some actively used commercial trawl and crabbing grounds. The impacts of these changes on affected commercial fishers would be significant enough to require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- The impacts of the zoning changes to other commercial fisheries are estimated to be relatively minor and are unlikely to require specific impact mitigation. Some changes to current fishing practices may be required by fishers in the line fishery to reflect the expanded MNP zone network and Buffer zone.
- Some actively used recreational fishing areas would be incorporated in the expanded MNP zone network and/or Buffer zone, e.g. Wolf Rock. Recreational fishers would incur loss of (or limitations to) access to these areas; however, as the recreational fishing sector was well represented in the consortium that developed this zoning arrangement it is assumed any access limitations that result would be acceptable to the sector.
- Cost to government (labour and operating) of approximately $275,000 annually to enforce the provisions of the network of MNP, CP and HP zones (an increase of approximately $114,000/yr on enforcement costs for the current management of the zoning network).
- Capital cost to government of approximately $1.4 million to upgrade the existing patrol vessel to undertake effective open water compliance and enforcement activities.

In summary, Option 2:

- does not sufficiently increase the proportion of the marine park within MNP zones to meet the 2010 CBD target of 10% (a target which is due to expire and is likely to be replaced by a significantly higher target

later this year of 30%) - without adequate representation of all habitat types in the marine park, improvement of conservation outcomes for biodiversity and resilience of these habitats to disturbance events is likely to be inhibited
- does not meet the SRG habitat representation target of 30% of each vulnerable habitat type and 10% of other habitat types in the marine park protected within MNP zones
- does not provide a representative, comprehensive and integrated zoning plan framework in accordance with best practice management principles for habitat representation that includes connectivity between, and replication of habitat types in highly protected zones
- does not include zoning changes that would improve representation of the broad range of habitat types in the marine park required to enhance conservation outcomes for threatened and other species using the park
- has limited improvement in spatial distribution of highly protected zones (MNP and CP zones) throughout the marine park - this lack of connectivity can impact on threatened and other species offspring, juveniles, and adults that move throughout the marine park utilising a range of habitats during different life stages or times of the year
- does not improve the protection of a connected suite of habitat types in MNP zones, and across the terrestrial and marine interface which inhibits the ability of some habitat types, e.g. saltmarsh and mangroves, to respond to climate change.

In relation to addressing the problems associated with low levels of habitat representation in the current zoning plan, the zoning network in Option 2 would be expected to result in minor conservation gains as increases in the representation of vulnerable and other habitat types across the marine park are small. While Option 2 generally minimises socio-economic impacts on commercial and recreational fishers with few proposed new or expanded MNP, Buffer or CP zones, and there is a level of stakeholder acceptability of the proposal given it has been prepared and endorsed by several key stakeholder groups, it is not the preferred option to address habitat representation issues with the current zoning plan.

6.1.1.3 Option 3 – Change zoning to include 12.8% of the area of the marine park in MNP zones

This is the preferred option that is reflected in the draft zoning plan

In recognition of the mix of habitat types found in the marine park and the emerging CBD post-2020 global targets for protected areas, Option 3 seeks to balance conservation of the marine environment with commercial and recreational use of the marine park and minimise impacts on stakeholders. This option builds on broad stakeholder feedback and balances the SRG's biophysical and socio-economic guiding principles to deliver a configuration of integrated zones that protects 16% of the total area of all vulnerable habitat types and 10.6% of the total area of all other habitat types within the MNP zone network.

Option 3 (see Figure 3 and Draft zoning plan (zones) Appendix 4) would establish eight new and 13 expanded MNP zones and results in 12.8% of the marine park being protected in MNP zones. The placement of these new and expanded MNP zones minimises impacts on commercial and recreational fishing where practical and ensures appropriate amounts of each habitat type are represented in the MNP zone network and important habitats for threatened species are protected.

New and extended CP zones also contribute to habitat protection and associated biodiversity outcomes by minimising the impacts associated with coastal development and most forms of fishing. When combined with the existing and proposed MNP zones, this option would enable 28.9% of the marine park to be included in highly protected zones which closely reflects the proposed CBD post-2020 protected area-based target of 30%. This option also addresses the CBD reference to "*well connected systems of protected areas and other effective area-based conservation measures*". Table 2 compares the proportion of each habitat type represented within the current zoning plan with that proposed in each zone under this option.

Appendix 5 outlines the basis for establishing all new and expanded MNP zones proposed under option 3. In summary:

- An MNP zone would protect >50km^2 of the Mary River paleochannel deep water habitats including deep subtidal seagrass and deep holes and gutters (consolidated).
- Offshore of Wyuna Creek and north of Ngkala Rocks on the eastern side of K'gari (Fraser Island) MNP zones would protect representative areas of high energy subtidal sand. The MNP zone to the north of Ngkala Rocks extends to the high water mark to provide continuous protection of habitats from the beach to the offshore marine park boundary. This also provides connectivity of habitats across the marine and terrestrial interface as it directly adjoins the Great Sandy National Park.

- Estuarine habitats, stands of cannonball mangroves at the southern limit of their distribution, plus grey and river mangroves are incorporated into the Susan River MNP zone.
- The Cowra Point MNP zone protects shallow water habitats important for dugong and turtles (intertidal and shallow subtidal seagrass), and mangroves and saltmarsh. It provides connectivity between complementary vulnerable habitat types, allowing landward migration of these habitats in response to climate change impacts.
- A new MNP zone outside of Baffle Creek incorporates the mouth of Littabella Creek, protecting high energy open sandy foreshore habitat and connecting marine and terrestrial habitats as it directly adjoins the Mouth of Baffle Conservation Park.
- An area of unique reef habitat within the marine park at Four Mile Reef is protected in a new MNP zone. A high density of *Pocillopora* sp. hard corals dominate the coral community, which is unusual at a local and regional level, and shows similarities with Central/South American reef formations. This reef is the only fully subtidal and the deepest coral reef in the marine park, has a solid calcareous reef base and a vertical, continuous building structure similar to that of reefs within offshore regions of the Great Barrier Reef.
- The entire inshore coral reef system at Pialba on the southern foreshore of Hervey Bay, estimated to be 6,500 years old, is incorporated into a new MNP zone. This healthy fringing coral reef formation supports seven of the 11 known species of *Turbinaria* coral recorded in the Indo-Pacific region, and a suite of branching soft corals.
- An expansion is proposed to the existing MNP04 and MNP10 within Hervey Bay to include large areas of vulnerable shallow and deep subtidal seagrass habitat types that are important for turtles and dugongs.
- An expanded MNP zone at Ferguson Spit incorporates a rare, deep water gastropod reef habitat.
- The Buffer zone at Wolf Rock would be removed and the existing MNP zone extended to protect critically endangered grey nurse sharks more effectively from fishing-related injury and mortality (see section 6.3.2.4). This MNP zone would incorporate habitat at Round Rock and the Pinnacles used by female grey nurse sharks undertaking excursions from their main aggregation site at Wolf Rock. Part of Double Island Point headland, a key geological feature of the marine park and 'anchor point' for the Cooloola sand mass, is incorporated into the extended Wolf Rock MNP zone.

Option 3 also proposes to modify the boundaries of several existing MNP zones in response to community feedback and management difficulties around the ability to comply with and enforce no-fishing rules. Key locations where the existing MNP zones are proposed to be modified for this purpose are:

- Hoffman's Rocks where the southern boundary is proposed to be moved north by approximately 250m to avoid a rocky outcrop and gutter popular with spearfishers
- the mangrove islands of Turkey, Bookar and Walsh Islands in the Great Sandy Strait where the existing MNP18 and MNP20, and the eastern side of MNP19 would be consolidated into a new, expanded MNP zone that addresses long-term boundary uncertainty and compliance matters, while reducing impacts on commercial crabbers.

Option 3 includes representation of all 23 habitat types in the MNP zone network, including the four habitat types not currently included in any existing MNP zone, and improves representation of all but two habitat types (mangroves and boulder dominated rocky shores). Representation of some vulnerable habitat types would increase significantly compared to the existing zoning plan (refer Table 2) including deep subtidal seagrass (0-16%), intertidal corals (28-49%), subtidal corals (26-38%), gastropod reef (0-100%), and deep holes and gutters-unconsolidated (34-86%).

While representation of six of the 10 vulnerable habitat types do not meet the SRG's recommended target of 30%, seven of the 10 vulnerable habitat types are relatively well represented with >15% of their area in MNP zones (refer Table 2). The three remaining vulnerable habitats with <15% of their area included in MNP zones are subtidal gardens, coffee rock and mangroves. The Great Sandy National Park and others in the region play an important role in conserving biodiversity. As such, when the area of mangroves that are protected in adjoining National Parks (where fishing is prohibited) is included in habitat representation calculations, representation of mangroves would exceed 15%. Subtidal gardens and coffee rock habitat, on the other hand, occur in small patches with the known and estimated extent of these habitats being only 4.7km^2 and 4.9km^2 respectively. Coffee rock is also poorly mapped in the marine park, therefore making it difficult to achieve recommended representation targets for this habitat type.

Large increases in representation of other habitat types in the MNP zone network compared with the existing zoning plan include high energy rocky headlands (9-28%), subtidal rocky reef (18-40%), calcareous platform (3-39%), and high energy sandy bars (13-43%). Some habitat types are represented beyond the minimum recommended targets to:

- address problems with the existing zoning plan
- meet the SRG's guiding principles for the zoning plan review, in particular the principles recommending:

- the entirety of a habitat covering a discreet area should be included in a MNP zone e.g. a reef
- replication of habitat types in more than one MNP zone across the network.

- ensure effective protection and buffers for areas important for biodiversity.

Under option 3, there are two habitat types (gastropod reefs and high energy sandy bars) that would each occur in only one MNP zone with the entire extent of the mapped gastropod reef represented in one MNP zone. This is a unique and rare habitat type, present in just one location in the marine park and limited in extent. Two large areas of high energy sandy bar habitat occur only at the northern and southern ends of K'gari (Fraser Island) where significant coastal processes shape their formation. Of these two areas, the MNP zone at Breaksea Spit includes this habitat type.

Six habitat types would be replicated in 10 or more MNP zones within the marine park with three of these being vulnerable habitat types (saltmarsh, mangroves, intertidal and shallow subtidal seagrass). Increasing the size of MNP zones under Option 3 would improve both the habitat representation and connectivity of these highly protected zones across the network. Ten MNP zones would be >15km^2 compared with five under the existing zoning plan. Two MNP zones in central Hervey Bay would be each >160km^2 (167km^2 and 211km^2, respectively). New and expanded CP and HP zones would complement and buffer the more expansive MNP zone network proposed under this option, protecting habitats from threatening processes such as commercial trawling.

New CP zones proposed under this option, one in Platypus Bay and the other west of Wathumba Creek, provide protection of low energy habitat types (beach, subtidal sand), coffee rock and subtidal gardens important for biodiversity and productivity of infauna, as trawling would be prohibited and other extractive uses would be limited. A CP zone proposed to buffer the new MNP zone protecting the unique Four Mile Reef would reduce impacts of edge effects on this important coral reef habitat and protect shallow and deep subtidal seagrass habitat within western Hervey Bay.

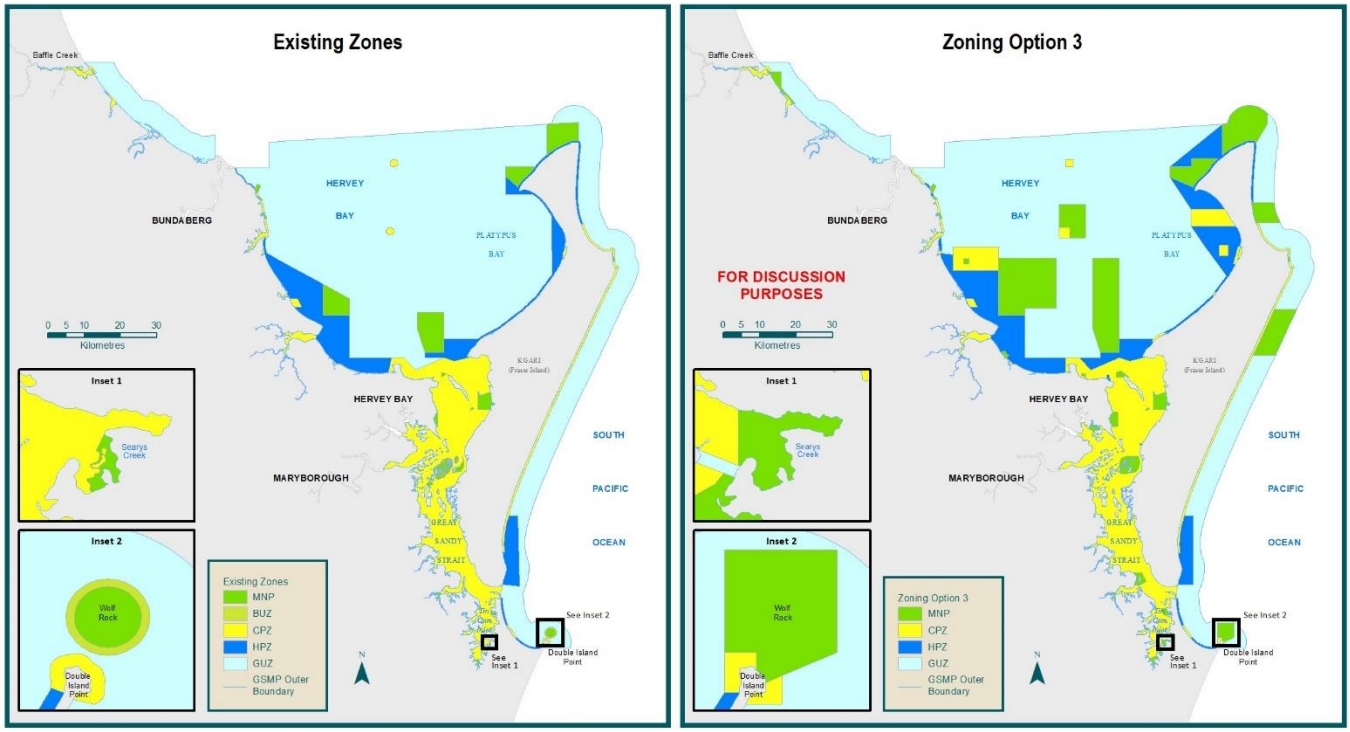


Figure 3. Great Sandy Marine Park existing zoning map (left) and Option 3 zoning map (right).

Option 3 has a modest total of 12.8% of the area of the marine park in MNP zones compared with 3.9% currently. The proposed changes under this option include:

- an upgrade in protection of the area of the marine park currently in Buffer zone to MNP zone
- an increase in the area of CP zones from 14.4% to 16.1%
- an increase in the area of HP zones from 7.6% to 10.1%
- a decrease in the area of GU zones from 74.1% to 61%.

Table 2 lists the existing and Option 3 representation of each habitat type in each zone type, and the total percentage of marine park in each zone type. Figure 4 compares the percentage of each of the ten vulnerable habitat types included in each zone type between the existing zoning plan and zoning proposed under Option 3.

Table 2: Existing Great Sandy Marine Park zoning plan habitat representation and habitat representation for changes proposed under Option 3 for Marine National Park (MNP), Buffer (BU), Conservation Park (CP), Habitat Protection (HP), and General Use (GU) zones. Values are shown as percentages of the whole marine park.

		MNP		BUZ		CPZ		HPZ		GUZ	
Code	**Marine Park Habitat type**	**Existing**	**Option 3**	**Existing**	**Option 3**	**Existing**	**Option 3**	**Existing**	**Option 3**	**Existing**	**Option 3**
1	Saltmarsh	15%	16%	0%	N/A	84%	82%	0%	0%	1%	2%
2	Mangroves	12% #	12% #	0%	N/A	84%	83%	0%	0%	4%	4%
3	Intertidal and shallow subtidal seagrass	8%	16%	0%	N/A	11%	16%	25%	26%	56%	42%
4	Deep subtidal seagrass	0%	16%	0%	N/A	0%	2%	0%	1%	99%	81%
5	Intertidal corals	28%	49%	0%	N/A	56%	44%	16%	7%	0%	0%
6	Subtidal corals	26%	38%	0%	N/A	45%	44%	16%	12%	13%	6%
7	Subtidal gardens	3%	5%	0%	N/A	50%	94%	0%	0%	47%	1%
8	Gastropod reefs	0%	100%	0%	N/A	0%	0%	0%	0%	100%	0%
9	High energy rocky headlands and platforms	9%	28%	0%	N/A	73%	72%	18%	0%	0%	0%
10	Low energy rocky shores and bars	10%	13%	0%	N/A	84%	76%	0%	4%	6%	8%
11	Boulder dominated rocky shores	17%	16%	0%	N/A	37%	64%	34%	20%	12%	0%
12	Subtidal rocky reef	18%	40%	0%	N/A	28%	24%	3%	3%	52%	33%
13	Calcareous platform	3%	39%	0%	N/A	40%	37%	13%	24%	45%	0%
14	Coffee rock	0%	2%	0%	N/A	41%	60%	56%	35%	3%	3%
15	High energy sandy beaches	0%	8% #	0%	N/A	59%	59%	14%	13%	26%	19%
16	High energy sandy bars	13%	43%	0%	N/A	3%	3%	31%	27%	53%	27%
17	Low energy sandy beaches and bars	4%	9%	0%	N/A	73%	69%	18%	18%	5%	5%
18	Claypans and mudflats	5%	11%	0%	N/A	91%	81%	1%	5%	3%	4%
19	Gravelly shores	4%	8%	0%	N/A	91%	86%	3%	3%	3%	3%
20	Low energy subtidal mud, sand or gravel	5%	7%	0%	N/A	19%	21%	6%	13%	70%	59%
21	High energy subtidal sand or gravel	4%	16%	0%	N/A	3%	3%	5%	6%	88%	75%
22	Deep holes & gutters (unconsolidated)	0.2%	11%	0%	N/A	3%	4%	0%	7%	97%	78%
23	Deep holes & gutters (consolidated)	34%	86%	19%	N/A	0%	0%	0%	0%	48%	14%
		3.9%	12.8%	0.04%		14.4%	16.1%	7.6%	10.1%	74.1%	61.0%

* Vulnerable habitat types

This habitat type exceeds the 15% or 10% habitat representation targets when areas of the habitat type that are protected in adjoining National Parks (where fishing is prohibited) are included.

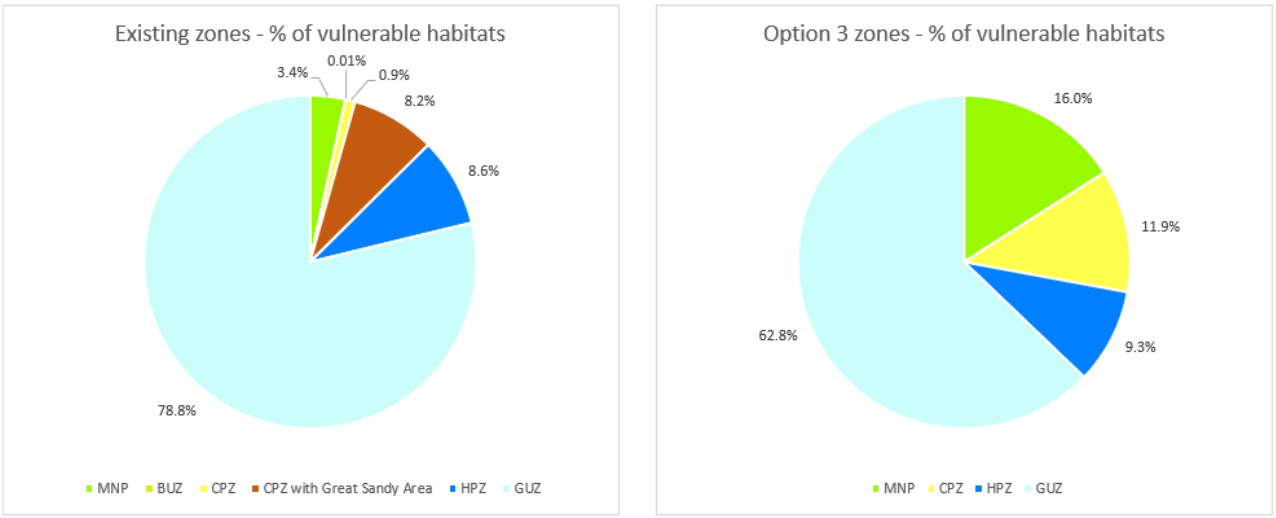


Figure 4. Percentage of the ten vulnerable habitat types of the Great Sandy Marine Park incorporated in each zone type in the current zoning plan (left) and Option 3 (right).

Potential benefits

- Moderate improvement in overall habitat representation with an increase from 3.9% to 12.8% of the marine park in MNP zones. The proposed zoning arrangements would be expected to deliver strong conservation outcomes by protecting, replicating and connecting the full range of 23 habitat types of the marine park, which include unique biological and geomorphological features, vulnerable and rare habitats. This option reflects the proposed CBD post-2020 global biodiversity target for representing habitats in highly protected zones, with 28.9% of the marine park included in these zones.
- The MNP zone network would be supported by complementary zoning to enhance connectivity between the individual MNP zones. Improved connectivity of MNP zones across the marine park through more and larger MNP zones:
    - aids species' ability to move between key habitats
    - supports movement of offspring and juveniles between habitats important in early life stages
    - allows genetic exchange between populations.
- Habitats protected in new/expanded MNP zones (as well as CP zones and HP zones) are expected to improve biodiversity, better protect habitats critical to a wide variety of species including threatened species, and provide increased valuable ecosystem services such as carbon sequestration, nutrient cycling and nursery areas for commercially and recreationally important fish species.
- Protects more than 15% of the total area of all vulnerable habitat types and more than 10% of the total area of all other habitat types within the MNP zone network, delivering considerable improvements on the existing zone plan (3.4% of vulnerable and 4.2% of other habitat types), and supporting the maintenance of all habitats and associated biodiversity.
- The eight new and 13 expanded MNP zones would protect representative habitat from threatening processes and minimise edge effects. Larger areas of threatened species' home ranges and critical habitats important at different life stages would be accommodated within MNP zones where possible, to enhance protection and resilience of these habitats which in turn is expected to improve conservation outcomes for these species.
- Areas of the marine park in highly protected zones that are generally free from extractive activities and physical disturbance promotes greater resilience against threats associated with climate change and other human induced impacts. This was demonstrated by the resilience of MNP zones protecting reef areas in Moreton Bay Marine Park following the 2011 floods.
- MNP zones contribute to habitat protection that can increase fish diversity, abundance, size and "spillover" of species to adjacent fishable areas. The spillover effect from MNP zones in the Great Barrier Reef and Moreton Bay Marine Parks is well documented. The larger and more numerous MNP zones proposed in Option 3, compared to the current zoning, would be expected to provide good spillover value for biodiversity and adjacent fisheries.
- Under this option, the improved protection of habitats would be expected to enhance the natural values of the marine park that are prized by the community and regarded as a natural and commercial asset, thus providing a strong basis for nature-based tourism (e.g. snorkelling, diving, kayaking, wildlife viewing) and educational and research opportunities. For example, the new MNP zone at Pialba, along with providing benefits to biodiversity through protecting a nearshore coral reef, is a local, easy to access shore based

snorkelling site. Protecting this reef habitat is expected to provide additional opportunities for existing tourism businesses along the Hervey Bay foreshore to provide snorkel tours to these reefs. Similarly, tourism opportunities would be expected to benefit from the inclusion of the unique reef habitat at Four Mile Reef in a new MNP zone.

Potential costs

- Reduction in the area available for commercial fishing, to varying degrees, through the establishment and expansion of MNP, CP and HP zones. The impacts of these changes on affected commercial fishers would be significant enough to require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues. As indicated in the preferred approach paragraph below, Option 3 is the preferred option to address habitat protection and as such a detailed analysis of the costs to commercial fishing sectors is presented in section 7.
- Expansion of the MNP zone network is expected to impact some recreational fishers as some actively used recreational fishing and crabbing locations (e.g. Four Mile Reef, sites near Wolf Rock, Turkey, Bookar, Walsh islands complex) will be included in the proposed larger MNP zone network. As such, the MNP zones will prohibit fishing and collecting from an extra 8.9% of the marine park than under the existing zoning plan. Therefore, associated socio-economic benefits from recreational fishing activities may be reduced. As indicated in the preferred approach paragraph below, Option 3 is the preferred option to address habitat protection and as such a detailed analysis of the costs to recreational fishing is presented in section 7.
- Cost to government (labour and operating) of approximately $318,000 annually to enforce the provisions of the network of MNP, CP and HP zones (an increase of approximately $157,000/yr on enforcement costs for the current management of the zoning network).
- Capital cost to government of approximately $1.4 million to upgrade the existing patrol vessel to undertake effective open water compliance and enforcement activities.
- Capital cost to government of approximately $2.5 million to provide alternative fishing locations, through the installation of artificial reefs.

In summary, this option:

- does not meet the SRG habitat representation target of 30% of each vulnerable habitat type and 10% of other habitat types in the marine park protected within MNP zones but does reflect the proposed CBD post-2020 protected area-based target (which includes a mix of highly protected area types) as 28.9% of the area throughout the marine park would be included in highly protected zones (MNP and CP zones combined)
- creates a system of zoning that meets contemporary marine protected area management principles, Comprehensive, Adequate, Representative and Efficient (CARE) principles for habitat protection and an integrated zoning framework that balances conservation and use of the marine park
- protects 16% of the total area of vulnerable habitats in MNP zones, compared to 3.4% under the current zoning plan
- ensures all ten vulnerable habitat types are protected in the MNP zone network and seven are each represented in four or more MNP zones
- ensures all but four of the 23 habitat types are each replicated in at least three MNP zones across the network (except for the gastropod reef, deep holes and gutters (consolidated and unconsolidated) and high energy sandy bars which have a limited extent in the marine park)
- establishes and extends MNP zones in key locations used by threatened species including turtles, dugong, and grey nurse sharks
- creates larger MNP zones that incorporate a mosaic of habitat types
- aligns MNP zones with adjacent terrestrial protected areas
- incorporates known aspirations of First Nations peoples for habitat protection
- minimises impacts on recreational and commercial fishers, especially mud crabbing (see section 7).

This option would achieve various objectives of the zoning plan review (section 5) and significantly improves the representation of many habitats in MNP zones, compared to the current zoning plan, with all 23 habitat types represented. Whilst not meeting the SRG's recommendation for representation in MNP zones, more than 15% of the total area of vulnerable habitat types and more than 10% of the total area of other habitat types have been included in the MNP zone network. Other SRG biophysical and socio-economic guiding principles for the zoning plan review are addressed by the proposed changes under this option such as creating larger MNP zones, replication of habitat types and connectivity of MNP zones within the network.

Option 3 meets SRG guiding principles by achieving an appropriate balance between conservation and sustainable use of the marine park, ensuring environmental, social, economic and cultural benefits and costs have been considered, and zoning impacts on users of the marine park have been minimised.

Proposed zoning in Option 3 to address the problems with habitat representation in the existing zoning plan would be expected to result in moderate conservation gains as:

- increases in representation of vulnerable and other habitat types across the marine park is improved
- connectivity of different habitat types within MNP zones and between highly protected zones across the marine park is enhanced
- expanded and new MNP zones protect greater areas of threatened species habitat to improve habitat quality and resilience and assist in the recovery of these species.

6.1.1.4 Option 4 – Change zoning to include 20.6% of the area of the marine park in MNP zones

Option 4 (Figure 5) addresses the emerging CBD post-2020 global targets for protected areas of 30% of the planet under protection and conservation, and honours the reference to "*well connected systems of protected areas and other effective area-based conservation measures*". When MNP and CP zones are combined in this option, 33.6% of area throughout the marine park would be included in highly protected zones.

This option most closely reflects the SRG's recommended biophysical principle of protecting at least 30% of the area of each vulnerable habitat and at least 10% of the area of each other habitat type within the MNP zone network. Under this option, 20.6% of the marine park would be zoned as MNP. Besides increasing the percentage of marine park in MNP zones, Option 4 also includes the establishment, expansion and amendment to CP zones in various locations throughout the marine park.

The MNP zone network under option 4 includes 13 new and 13 expanded MNP zones. Some proposed additions to the MNP network under Option 3 are replicated in this option, including the MNP zone outside the mouth of Baffle Creek and at Pialba, Cowra Point and north of Ngkala Rocks. The new MNP zones proposed at Four Mile Reef, the Hervey Bay paleochannel, and Susan River under Option 3, have been expanded under option 4 to increase habitat representation. A new MNP zone west of Wathumba would protect subtidal gardens and sand habitat on the eastern side of Hervey Bay that is important for biodiversity, productivity of infauna, and includes habitat used by transiting loggerhead and green turtles. In northern Platypus Bay, the MNP zone would protect and ensure connectivity of representative areas of low energy sandy beach with unvegetated subtidal sand habitats to deeper water. An area of coffee rock is included in this MNP zone, and as this zone directly adjoins the Great Sandy National Park, protection is integrated across marine and terrestrial landscapes and adjacent complementary habitats.

Inshore coral reef habitat at Point Vernon would be incorporated into a small MNP zone to protect intertidal and subtidal coral dominated by large multi-species stands of hard coral that include nine of the 11 Indo-Pacific species of *Turbinaria*, and a diverse array of soft coral species. A new MNP zone at Ching Island on the southern side of the mouth of Kauri Creek in the Great Sandy Strait would include shallow estuarine habitats including the vulnerable habitats of intertidal and subtidal seagrass, and mangroves. This zone would protect shallow water habitats that support high densities of dugongs and are important for foraging turtles. The largest new MNP zone would be located offshore of Woodgate in central Hervey Bay where two existing MNP zones have been expanded and combined to cover 542km^2. The representation of large areas of intertidal and shallow subtidal seagrass, and deep subtidal seagrass, which under the existing zoning plan is not represented in any MNP zone, would ensure habitat important to threatened species including feeding, resting, and transiting turtles and dugong is protected.

Of the existing MNP zones that would be extended under Option 4, the zone at Wolf Rock would have the same extent under Option 4 as Option 3, as would Ferguson Spit and Breaksea Spit, and the MNP zones located at Myers, Searys, Cooloola and Carland Creeks. The Marsh Creek MNP zone would be extended offshore to incorporate a greater representative area of seagrass and sandy habitat in this dugong high use area. Little Woody Island's MNP zone would be extended under this option to protect a diverse area of high-quality habitats including saltmarsh, mangroves, seagrass, corals, subtidal gardens, sand, claypans, mudflats and two creek systems, including Boon Boon Creek utilised by basking turtles. An expansion of the MNP zone at Mangrove Point would merge with the existing Duck Island MNP zone to protect representative areas of estuarine habitat within the northern Great Sandy Strait intensively used by basking and foraging green turtles, and foraging loggerhead turtles. This MNP zone includes habitat for the vulnerable water mouse and a feeding area for shorebirds from the adjoining significant shorebird high tide roost site. The Turkey, Bookar and Walsh Islands MNP zones would be integrated into a single MNP zone to protect connectivity of complementary habitats associated with estuarine mangroves and associated narrow channels and adjoining intertidal habitats.

All 23 habitat types would be represented in MNP zones including the four habitat types not currently included in existing MNP zones. This option would improve representation of vulnerable habitat types with over 30% representation in MNP zones for six out of the ten vulnerable habitat types (deep subtidal seagrass, intertidal corals, subtidal corals, subtidal gardens, gastropod reef, deep holes and gutters (consolidated)), which would

maximise opportunities for the protection of biodiversity. In relation to the remaining four vulnerable habitat types that don't achieve 30% representation in MNP zones, it is important to note that they are close to this target – for example, 29% of the area of shallow and subtidal seagrass is represented in MNP zones. When areas of saltmarsh and mangroves protected in adjoining National Parks (where fishing is prohibited) are included in habitat representation calculations, 30% representation of each of these vulnerable habitat types is achieved. The same applies to one non-vulnerable habitat type (high energy sandy beaches - 8%) which meets the SRG's recommended protection of 10% of its area in MNP zones when areas of this habitat in adjoining National Parks are included.

Option 4 would significantly improve the existing zoning plan's representation of many habitats in MNP zones with all except one non-vulnerable habitat type (boulder dominated rocky shores) increasing in percentage of area represented in MNP zones. Table 3 compares the proportion of each habitat type represented within the current zoning plan with that proposed in each zone under this option.

About a quarter of the mapped habitat types would be replicated in 10 or more MNP zones within the marine park under this option. Many of these zones, or the area of habitat represented within each zone, would be larger than existing MNP zones. Fourteen MNP zones would have a total area of more than 15km^2. Two habitat types (gastropod reefs and high energy sandy bars) would each only be included in one MNP zone compared with four habitat types in the existing zoning plan. The entire extent of the mapped gastropod reef, a unique, rare and vulnerable habitat type that is limited in extent and present in only one known location in the marine park, would be represented in just one MNP zone.

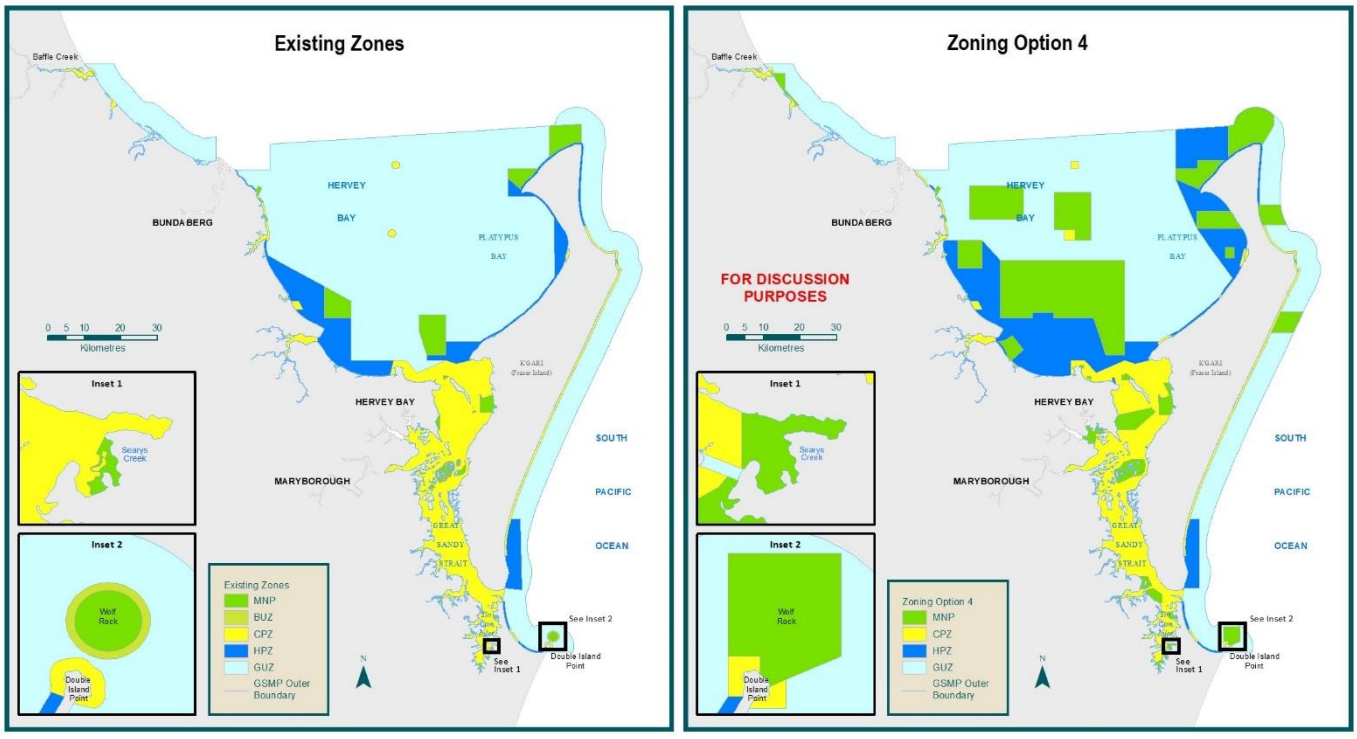


Figure 5. Great Sandy Marine Park existing zoning map (left) and Option 4 zoning map (right).

Option 4 would result in a total of 20.6% of the area of the marine park in MNP zones compared with 3.9% currently. The proposed changes under this option include:

- an upgrade in protection of the area of the marine park currently in Buffer zone to MNP zone
- a decrease in the area in CP zones from 14.4% to 13.0%
- an increase in the area in HP zones from 7.6% to 15.2%
- a decrease in the area in GU zones from 74.1% to 51.1%.

Table 3 lists the existing and Option 4 representation of each habitat type in each zone type, and the total percentage of marine park in each zone type. Figure 6 compares the percentage of each of the ten vulnerable habitat types included in each zone type between the existing zoning plan and zoning proposed under Option 4.

Table 3: Existing Great Sandy Marine Park zoning plan habitat representation and habitat representation for changes proposed under Option 4 for Marine National Park (MNP), Buffer (BU), Conservation Park (CP), Habitat Protection (HP), and General Use (GU) zones. Values are shown as percentages of the whole marine park.

		MNP		BUZ		CPZ		HPZ		GUZ	
Code	**Marine Park Habitat type**	**Existing**	**Option 4**	**Existing**	**Option 4**	**Existing**	**Option 4**	**Existing**	**Option 4**	**Existing**	**Option 4**
1	Saltmarsh	15%	23% #	0%	N/A	84%	75%	0%	0%	1%	2%
2	Mangroves	12%	24% #	0%	N/A	84%	71%	0%	0%	4%	4%
3	Intertidal and shallow subtidal seagrass	8%	29%	0%	N/A	11%	9%	25%	47%	56%	15%
4	Deep subtidal seagrass	0%	35%	0%	N/A	0%	0%	0%	2%	99%	62%
5	Intertidal corals	28%	53%	0%	N/A	56%	40%	16%	7%	0%	0%
6	Subtidal corals	26%	40%	0%	N/A	45%	42%	16%	12%	13%	6%
7	Subtidal gardens	3%	52%	0%	N/A	50%	48%	0%	0%	47%	1%
8	Gastropod reefs	0%	100%	0%	N/A	0%	0%	0%	0%	100%	0%
9	High energy rocky headlands and platforms	9%	28%	0%	N/A	73%	72%	18%	0%	0%	0%
10	Low energy rocky shores and bars	10%	15%	0%	N/A	84%	74%	0%	4%	6%	8%
11	Boulder dominated rocky shores	17%	16%	0%	N/A	37%	64%	34%	20%	12%	0%
12	Subtidal rocky reef	18%	40%	0%	N/A	28%	24%	3%	3%	52%	33%
13	Calcareous platform	3%	47%	0%	N/A	40%	28%	13%	24%	45%	0%
14	Coffee rock	0%	24%	0%	N/A	41%	38%	56%	35%	3%	3%
15	High energy sandy beaches	0%	8% #	0%	N/A	59%	59%	14%	13%	26%	19%
16	High energy sandy bars	13%	43%	0%	N/A	3%	3%	31%	27%	53%	27%
17	Low energy sandy beaches and bars	4%	18%	0%	N/A	73%	60%	18%	18%	5%	5%
18	Claypans and mudflats	5%	15%	0%	N/A	91%	77%	1%	5%	3%	4%
19	Gravelly shores	4%	17%	0%	N/A	91%	77%	3%	3%	3%	3%
20	Low energy subtidal mud, sand or gravel	5%	10%	0%	N/A	19%	18%	6%	16%	70%	55%
21	High energy subtidal sand or gravel	4%	13%	0%	N/A	3%	3%	5%	10%	88%	75%
22	Deep holes & gutters (unconsolidated)	0.2%	12%	0%	N/A	3%	4%	0%	20%	97%	64%
23	Deep holes & gutters (consolidated)	34%	86%	19%	N/A	0%	0%	0%	0%	48%	14%
		3.9%	20.6%	0.04%		14.4%	13.0%	7.6%	15.2%	74.1%	51.1%

* Vulnerable habitat types

This habitat type exceeds the 30% or 10% habitat representation targets when areas of the habitat type that are protected in adjoining National Parks (where fishing is prohibited) are included.

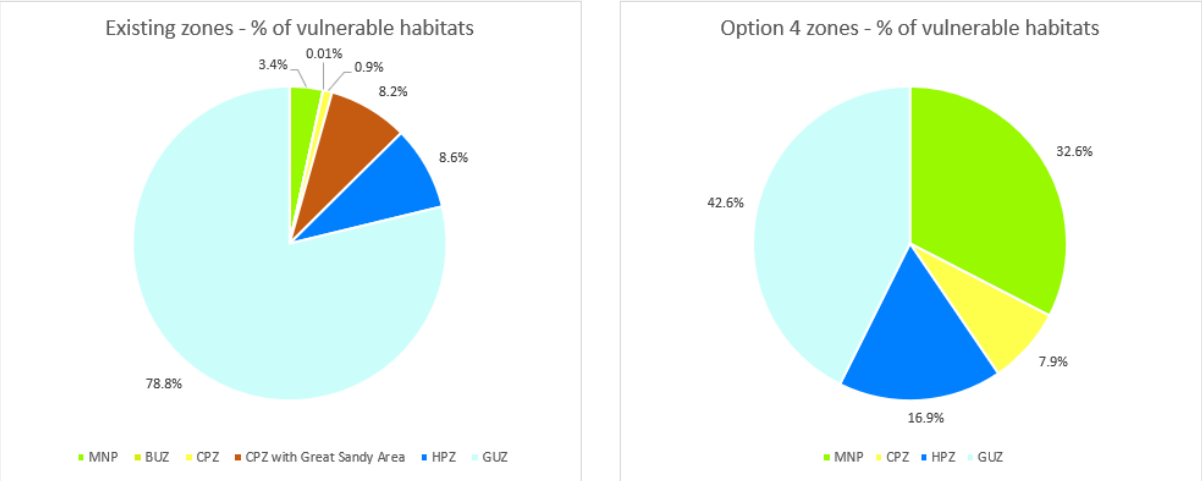


Figure 6. Percentage of the ten vulnerable habitat types of the Great Sandy Marine Park incorporated in each zone type in the current zoning plan (left) and Option 4 (right).

Potential benefits

- The zoning arrangements of Option 4 are expected to deliver strong conservation outcomes by protecting, replicating and connecting the full range of 23 habitat types of the marine park, which include unique biological and geomorphological features, and vulnerable and rare habitats. This option:
  - exceeds the draft post-2020 global targets for habitat representation in highly protected zones
  - includes 33.6% of the marine park included in the MNP and CP zones
  - provides a comprehensive network of highly-protected zones that support conservation of biodiversity and protect extensive areas of core habitat for threatened species.
- The MNP zone network is supported by complementary CP and HP zoning to enhance connectivity between the individual MNP zones. Habitats protected in new/expanded MNP zones, as well as CP zones, are expected to improve biodiversity, better protect habitats critical to a wide variety of species including threatened species, and provide increased valuable ecosystem services such as carbon sequestration, nutrient cycling and nursery areas for commercially and recreationally important fish species.
- The 13 new and 13 expanded MNP zones in Option 4 protect larger areas of representative habitat which would be expected to reduce threatening processes and minimise edge effects. Larger areas of threatened species home ranges and critical habitats important at different life stages have been accommodated within MNP zones where possible, to enhance protection and resilience of these habitats and improve conservation outcomes for these species.
- Improved replication of habitat types in MNP zones, whereby the four habitat types that are not currently represented in any existing MNP zone – deep subtidal seagrass, gastropod reefs, coffee rock and high energy sandy beaches - are now represented. Three of the four habitat types that currently each occur only once throughout MNP zones are now replicated across several MNP zones. These changes would improve outcomes for biodiversity and encourage habitat integrity and resilience against the impacts of climate change.
- Much improved connectivity of MNP zones throughout the marine park, enhanced by the large MNP zones in the centre and northern area of Hervey Bay, which:
  - aids species' ability to move between key habitats including the Mary River paleochannel
  - supports movement of offspring and juveniles between habitats important in early life stages
  - allows genetic exchange between populations.
- Areas of the marine park in highly protected zones that are generally free from extractive activities and physical disturbance are expected to have greater resilience against threats associated with climate change and other human induced impacts. This was demonstrated by the resilience of MNP zones protecting reef areas in Moreton Bay Marine Park following the 2011 floods.
- MNP zones contribute to habitat protection that can increase fish diversity, abundance, size and "spillover" of species to adjacent areas open to fishing. The spillover effect from MNP zones in the Great Barrier Reef and Moreton Bay Marine Parks is well documented. The larger and more numerous MNP zones in Option 4 compared to the current zoning, would be expected to provide excellent spillover value for biodiversity and adjacent fisheries.
- Under this option, protection of habitats would be expected to significantly enhance the natural values of the marine park that are prized by the community and regarded as a natural and commercial asset, thus providing a strong basis for nature-based tourism (e.g. snorkelling, diving, kayaking, wildlife viewing) and

educational and research opportunities. For example, the new MNP zone at Pialba, along with providing benefits to biodiversity through protecting a nearshore coral reef, is a local, easy to access shore based snorkelling site. Protecting this reef habitat is expected to provide additional opportunities for existing tourism businesses along the Hervey Bay foreshore to provide snorkel tours to these reefs. Similarly, tourism opportunities would be expected to benefit from the inclusion of the unique reef habitat at Four Mile Reef in a new MNP zone.

Potential costs

- Large reduction in the area available for commercial fishing through the establishment and expansion of MNP, CP and HP zones. The impacts of these changes on affected commercial fishers would be significant enough to require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- Large expansion of the MNP zone network is expected to impact some recreational fishers as MNP zones prohibit fishing and collecting.
- Cost to government (labour and operating) of approximately $336,000 annually to enforce the provisions of the network of MNP, CP and HP zones (an increase of approximately $174,000/yr on enforcement costs for the current management of the zoning network).
- Capital cost to government of approximately $1.4 million to upgrade the existing patrol vessel to undertake effective open water compliance and enforcement activities.
- Capital cost to government of approximately $2.5 million to provide alternative fishing locations, through the installation of artificial reefs.

In summary, Option 4 achieves objectives of the zoning plan review and SRG biophysical guiding principles by:

- addressing the emerging CBD post-2020 global targets for protected areas of 30% of the planet under protection and conservation
- creating a system of zoning that meets contemporary marine protected area management principles, Comprehensive, Adequate, Representative and Efficient (CARE) principles for habitat protection and an integrated zoning framework to balance conservation and use of the marine park
- protecting approximately 33% of the total area of vulnerable habitats in MNP zones, compared to 3.4% under the current zoning plan
- ensuring all 10 vulnerable habitat types are protected in the MNP zone network and eight of these are each represented in at least five MNP zones
- all habitat types are each replicated in at least three MNP zones across the network (except for the gastropod reef, deep holes and gutters (consolidated and unconsolidated) and high energy sandy bars, which have a limited extent in the marine park)
- establishing and extending MNP zones in key locations used by threatened species including turtles, dugong, and grey nurse sharks
- creating larger MNP zones that incorporate a greater mosaic of habitat types
- aligning MNP zones with adjacent terrestrial protected areas
- incorporating known aspirations of First Nations peoples for habitat protection.

The proposed zoning in Option 4 to address the problems with habitat representation in the existing zoning plan would be expected to result in moderate to high conservation gains as increases in representation of vulnerable and other habitat types across the marine park would be improved. Option 4 would create major impacts on a range of commercial fishing activities (especially crabbing and trawling) and significantly limit recreational fishing in the marine park, especially near the township of Hervey Bay. The flow on impacts to fishing-related businesses could be significant. This option is also inconsistent with community feedback and expectations, and presents difficulties in appropriately balancing conservation and use.

Table 4 summarises the difference in characteristics of habitat protection under options 1 to 4 presented in this section.

Table 4. Characteristics of habitat protection under the four options proposed to address the identified problems under the current zoning plan (MNPZ=Marine National Park zone, BZ=Buffer zone, CPZ=Conservation Park zone).

Characteristic	Current Zoning Plan (Option 1)	Option 2	Option 3	Option 4
Total MNPZ %	3.9	8.3	12.8	20.6
Total MNPZ, BZ and CPZ %	18.3	23.8	28.9	33.6
No. of new MNPZ	0	2	8	13
No. of expanded MNPZ	0	2	13	13
No. of habitat types in MNPZ (of 23)	19	20	23	23
No. of habitat types that each occur in only one MNPZ	4	3	2	2
No. of vulnerable habitat types not represented in MNPZ (of 10)	3	2	0	0
Vulnerable habitat types not represented in MNPZ	Deep subtidal seagrass Gastropod reefs Coffee rock	Gastropod reefs Coffee rock	N/A	N/A
No. of vulnerable habitat types under-represented (<30%) in MNPZ	9	9	6	4
% of amalgamated area of all 10 vulnerable habitat types in MNPZ	3.4	11.8	16	32.6
No. of non-vulnerable habitat types not represented in MNPZ (of 13)	1	1	0	0
Non-vulnerable habitat types not represented in MNPZ	High energy sandy beaches	High energy sandy beaches	N/A	N/A
No. of non-vulnerable habitat types under-represented (<10%) in MNPZ	9	9	4	1
% of amalgamated area of all 13 non-vulnerable habitat types in MNPZ	4.2	5.8	10.6	12.1
No. of MNPZ >15km^2	5	7	10	14

Preferred approach to protect habitat through habitat representation in MNP zones

Option 3 and Option 4 best meet the objectives of the zoning plan review (section 5). Both options:

- improve the current network of MNP zones
- reflect draft CBD post-2020 global biodiversity targets
- meet contemporary marine protected area management principles for habitat protection
- deliver an integrated zoning framework that balances conservation and use of the marine park
- improve protection and the potential for long-term population recovery of threatened species
- support state, national and international obligations
- complement the management of existing declared FHAs and adjoining National Parks, and the K'gari (Fraser Island) World Heritage Area.

Most of the SRG's 10 biophysical and five socio-economic guiding principles for the zoning plan review, based on the CARE principles, are reflected in Options 3 and 4.

For this zoning plan review, a target of at least 15% representation in MNP zones for each vulnerable habitat is considered by the department to be a balanced and achievable approach to improve conservation outcomes while minimising socio-economic impacts to stakeholders. Option 3 incorporates more than 15% of the total area of vulnerable habitat types in the MNP zone network, attempts to minimise costs and impacts and addresses problems with habitat protection in the existing zoning plan, and is therefore, the preferred option.

Option 3 would provide a considered and modest approach to proposed zoning that strikes an appropriate balance

between conservation and use, benefits and costs. This option would provide a significant improvement in habitat protection to that of the existing zoning plan, considers the costs to government and the community, incorporates community feedback to date, and is expected to deliver broad benefits. The costs incurred through proposed changes under Option 3 would be addressed through the delivery of an impact mitigation package which will be available to affected commercial fishers and post-harvest sector businesses. The proposed changes to the zoning plan in Option 3 ensure improvement of conservation outcomes for biodiversity, and in particular for threatened species such as grey nurse sharks, turtles, dugongs, dolphins, and shorebirds, whilst allowing for recreational and commercial fishing activities.

Option 4 would deliver significant improvements in habitat protection and representation, and connectivity, and result in moderate to high conservation gains. However, major impacts on commercial fishing activities would result with flow on effects to post-harvest sector businesses, and recreational fishing would be significantly impacted. As such, this option would not deliver an appropriate balance between conservation and use.

Conversely, Option 2, while having the least impact on commercial and recreational fishing, would be expected to produce only minor conservation gains and would not comprehensively and adequately improve habitat protection. This option would deliver only two new and two expanded MNP zones, vulnerable and other habitat types would be under-represented, some habitat types would be omitted from MNP zones, there would be inadequate replication of some habitat types throughout the MNP zone network and there would be no significant improvement of connectivity between highly protected areas across the marine park.

In summary, Option 3 is the preferred zoning arrangement to provide an improved foundation for the protection of the marine park's habitats and biodiversity. It addresses habitat protection shortcomings in the existing zoning plan and balances conservation and use. It does this by adopting best practice marine protected area management CARE principles, and meeting most of the guiding principles developed by the SRG for the zoning plan review. The protection of representative, well-connected and well-distributed areas of habitats under this option, will help to ensure that marine fauna can move across the seascape, and natural ecosystems are resilient and are adaptable to changes, including those induced by climate change. The conservation of marine biodiversity through the establishment of networks of highly protected zones also supports the health, wellbeing, culture, lifestyle, and economy of Queensland, through tourism, primary production, and recreation.

6.1.2 Damage to reef habitats from anchoring

Three sites within GSMP have unique, sensitive coral reef assemblages that are at risk of being damaged from anchoring given the popularity of the areas for fishing and boating: one within Platypus Bay, and two sites near Point Vernon (Gatakers Bay and Gables Point). Dragging anchor chains and anchors dropped directly onto reefs can physically break corals and other structures that form part of a reef. The damage of fragile species such as branching corals and sea whips, and loss of reef structure can have a detrimental impact on local marine biodiversity including the loss of unique species assemblages.

Both of the Point Vernon sites support coral communities that fringe the mainland coast, which is relatively rare in eastern Australian waters. Coral communities have existed here for thousands of years and have started to coalesce into larger reef structures. The fringing reef at Point Vernon is dominated in places by fields of *Goniopora spp* and large massive colonies of the family Faviidae and well developed *Turbinaria* assemblages. The area supports a high diversity of hard (over 30 species) and soft corals, including a high abundance of less common species. The site in Platypus Bay consists of an area of deep-water coral, sea whips and *Turbinaria* that provides habitat for a diversity of reef fish species.

The Point Vernon reefs are popular for vessel-based recreational fishers. They are easily accessible from a nearby public boat ramp and are sheltered from south-easterly winds. These attributes also make these reefs attractive to snorkellers and divers (including for some tourism operators). The use of these reefs is expected to continue to increase as the Hervey Bay population grows over time resulting in consequential increases in recreational boating, fishing and snorkelling activity in the Point Vernon area. The deeper reef area in Platypus Bay supports a variety of popular fish species and as such, receives high fishing use.

Options to protect the coral habitat in these locations from anchor damage include the establishment of a MNP zone or a designated No Anchoring Area. Public feedback to date has indicated a preference for No Anchoring Areas to be established at various locations to protect fragile coral species rather than the use of MNP zoning.

6.1.2.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.1.2.2 Option 2 – Establish three Marine National Park zones

This option would establish a small Marine National Park (MNP) zone at each of the Gatakers Bay (0.5km^2), Gables Point (0.8km^2) and Platypus Bay (0.8km^2) sites, where all forms of fishing and collecting would be prohibited. As fishing is the primary reason for the high vessel-based use of these sites, the prohibition of fishing through the establishment of these MNP zones would significantly decrease the use of the sites, and hence, reduce the anchor damage risk. This risk would not be entirely eliminated by the implementation of this option as other users such as snorkellers would be able to access the site and anchor.

Potential benefits

- Increased overall habitat representation in MNP zones (albeit small) leading to further expected improvements in biodiversity and resilience to impacts of climate change through additional sites in a network of MNP zones protecting subtidal and/or intertidal reefs and species associated with these habitat types.

Potential costs

- These reefs are utilised by recreational line fishers targeting reef species such as snapper, sweetlip, cod, tuskfish and barramundi, and the establishment of MNP zones would prohibit this activity.
- Establishing MNP zones may impact on a small number of commercial fishers in the marine aquarium fish (MAF) fishery who collect aquarium species from the coral reefs around Point Vernon. These impacts would be in addition to impacts associated with the establishment of other MNP zones over reef areas as proposed in section 6.1.1.3.
- Cost to government (labour and operating) of approximately $2500 annually to enforce the provisions of three MNP zones in these locations.

Option 2 would significantly reduce, but not eliminate the risk of anchor damage at these sites. It is an indirect method of addressing the anchor damage problem that is likely to be reasonably effective, however the MNP zone management would result in significant impacts to fishers' use of these sites that are unnecessary to achieve the desired outcome.

6.1.2.3 Option 3 – Establish three designated No Anchoring Areas

This is the preferred option that is reflected in the draft zoning plan

Designated No Anchoring Areas can assist in the protection of sensitive reef species and habitats by prohibiting the use of all forms of anchors. Under this option three relatively small No Anchoring Areas would be established at Gatakers Bay (0.5km^2), Gables Point (0.8km^2) and Platypus Bay (0.8km^2) (see Appendix 6). These are a management tool which directly targets the risk of anchor damage to sensitive habitats, and are used in Moreton Bay Marine Park and the Great Barrier Reef Coast Marine Park.

Potential benefits

- Designated No Anchoring Areas directly removes the risk of anchor damage to sensitive reef habitats while allowing recreational and commercial fishing activities to occur (subject to the underlying zone type).
- Increased use of sites (especially the reefs around Point Vernon which are close to the regional tourism hub of Hervey Bay) by tourism operators and the public for snorkelling to view undamaged reef structure and associated fish and invertebrate communities.

Potential costs

- While designated No Anchoring Areas allow for recreational and commercial fishing, modifications to line fishing methods may be required (e.g. drift fishing or the use of electric motors to hold position). Purchasing an electric outboard motor with a GPS spot lock function, for example, to minimise the risk of lines being snagged on reef structure or to simply hold station may incur a cost to some fishers who choose to do so. These motors range in price from $200 to $2000.

- Fishers in the marine aquarium fish fishery would be unable to anchor their vessel while undertaking collecting activities on the reefs in the No Anchoring Area. Minor changes may need to be made to their operations such as anchoring outside of the No Anchoring Area and snorkelling into the reef/s or having a skipper keep the vessel actively 'on-station' in the vicinity of the collecting activity if they wish to continue using the proposed No Anchoring Areas.
- Cost to government (labour and operating) of approximately $2500 annually to enforce the provisions of the No Anchoring Areas.
- A maximum penalty of 100 penalty units is proposed for non-compliance with the No Anchoring Area provisions. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

In summary, although the proposed No Anchoring Areas are small in size, Option 3 balances the need for habitat protection and use of the areas in which they are proposed. This is particularly relevant at Point Vernon which is in close proximity to the regional tourism hub of Hervey Bay and facilities such as boat ramps, a caravan park and foreshore parks and reserves.

Preferred approach to reducing damage to reef habitats from anchoring.
The use of designated No Anchoring Areas (Option 3) is the preferred management solution. No Anchoring Areas will deliver a precautionary and balanced conservation outcome that will directly protect the reefs from anchoring impacts, help to maintain their ecological function (which is also fundamental to them continuing to be productive fishing locations) and retain them as attractive nature-based tourism sites, while continuing to allow their use for fishing and other vessel-based activities. It is considered that the implementation of this option will result in a net benefit to Queensland, as the conservation benefits from these No Anchoring Areas and their flow-on benefits to sustaining the existing extractive and tourism uses, outweigh the inconvenience to users from having to modify their existing anchoring and fishing practices in these locations.

6.1.3 Damage to habitats from beam trawling in the lower reaches of the Mary River

Beam trawling is a commercial fishing activity that results in significant contact with the seafloor and habitat disturbance. A beam trawl consists of a rigid frame (i.e. a heavy tubular steel beam supported by steel beam heads at each end) to which a trawl net is attached, that is towed across the seafloor behind a fishing vessel. 'Tickler' chains attached at the mouth of the trawl net contact the substrate as the beam trawl moves along the seabed to trigger prawns to rise from the substrate where they are captured in the net.

The fishery is contentious in the community due to its physical interaction with benthic habitat and its capture of non-target species (by-catch). Given its physical habitat interaction, beam trawling (along with all other forms of trawling), is normally only allowed within General Use (GU) zones of the GSMP and other marine parks in Queensland. However, the current zoning plan includes a non-conforming use provision that allows beam trawling to also be conducted within the Conservation Park (CP) zone within the lower reaches of the Mary River and within the area extending one kilometre from the Mary River mouth, by persons who have continuously held a licence to operate in the beam trawl fishery in this area since the start of 31 August 2006. This provision was created when the marine park was established, to recognise the historic and ongoing beam trawl activity that occurred in this location.

Beam trawlers in the Mary River target prawns, including banana prawns and greasyback prawns, which are sold for both human consumption and bait.

This 'non-conforming use area' forms part of the T6 beam trawl fishery area, prescribed under fisheries legislation, that extends from Double Island Point to the Burrum River. Beam trawling within the T6 beam trawl fishery area is significantly constrained by the marine park zoning, with much of the T6 area being within zone types that prohibit trawling. The T6 fishery area also includes some areas that are outside the boundary of the marine park and therefore not subject to marine park management (e.g. areas upstream of the marine park boundary in the Mary River).

A 2019 report prepared by DAF (DAF 2019 Beam Trawl ERA Scoping Study) indicates that between 2006 and 2017 an average of only 29 days of beam trawl fishing per year were undertaken within the T6 fishery area and during the three year period from 2015 to 2017, no beam trawling at all was recorded from the T6 area. Over this 2006 -2017 period, the number of T6 fishery symbols (i.e. the number of beam trawl operators licenced to operate in the T6 fishery area) reduced from 14 in 2006 to four in 2017. Based on current records there are still four T6 fishery symbol held by commercial fishers.

As the legislative (zoning plan) provisions of the non-conforming use area only allow for the area to be used by a person who has continuously held a beam trawl authority to operate in this area since 31 August 2006, the number of symbol holders to which it applies has, and will continue to, decline over time as fishery symbols are traded or relinquished. Currently only two of the four T6 fishery symbol holders appear to meet the non-conforming use criteria to operate in this area.

This non-conforming use provision was intentionally designed to 'phase out' trawling from the CP zone at the mouth of the Mary River area over time. It has now reached the point where it is likely that only two fishery symbol holders can lawfully trawl in this area and that only minimal trawl catch and effort is occurring in the area. Allowing beam trawling within part of a CP zone via this non-conforming use provision is a significant marine park management compromise, that based on recent use levels, appears to be no longer justified. This zoning plan review provides an opportunity to remove this non-conforming use provision, permanently remove trawling related habitat disturbance from the area and potentially enable the remaining fishery symbol holders, who meet the non-conforming use criteria, to access the proposed commercial fishery impact mitigation package.

Public sentiment received in response to the 2019 discussion paper supports the removal of this beam trawling non-conforming use provision.

6.1.3.1 Option 1 – No change to zoning plan

This option would maintain the existing non-conforming use arrangements. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.1.3.2 Option 2 – Time-bound transitional provisions to phase out beam trawling in the lower reaches of the Mary River

Transitional provisions can be included in a zoning plan to allow an activity that is incompatible with zone objectives to continue for a set period of time with permission. Under this option, the existing non-conforming use requirement for a fisher to have continuously held a beam trawl authority to operate in the area since 31 August 2006 would apply however, additional transitional provisions would be applied to cease beam trawling as an activity, five years after the commencement of the revised zoning plan. At that time beam trawling in the non-conforming use area would be prohibited in accordance with the standard provisions of the CP zone.

Potential benefits

- Would provide a clear end point to the beam trawling related habitat disturbance within the area from which time natural habitat recovery would be expected to begin.

Potential costs

- Reduction in supply of local prawns (particularly bait prawns), although the limited beam trawling effort that appears to currently be occurring in this location suggests that this cost would be minimal.
- Potential to create increased habitat disturbance in the short term, should fishers seek to increase effort to maximise returns from the area, before access was prohibited.
- Commencement of the recovery of the benthic habitats within the area from ongoing trawling impacts would be delayed by five years.
- Potential to transfer effort to other areas of the T6 fishery area within general use zones of the marine park or to areas outside the marine park (e.g. further upstream in the Mary River) during the transitional period and/or once the transitional provisions end, increasing habitat disturbance in areas, where fishers may not have previously operated.

Option 2 would allow for the continuation of an activity (albeit for a reduced time period) that is inconsistent with the objects of a highly protected zone type and results in direct benthic habitat impact. However, this option would allow fishers to continue to benefit economically from the activity for a further five years, potentially providing time for fishers to restructure their business. The community (particularly recreational fishers) would also retain access to this local source of bait prawns during the transition period, minimising potential biosecurity risks associated with the use of non-local bait. Under this option no impact mitigation would be available for the affected T6 symbol holders at the conclusion of the five year transitional period.

6.1.3.3 Option 3 – Prohibit beam trawling immediately in the lower reaches of the Mary River

This is the preferred option that is reflected in the draft zoning plan

Under this option the current non-conforming use provisions for beam trawling would be removed from the zoning plan. The standard provisions of the CP zone that prohibit trawling would apply.

Potential benefits

- Would deliver an immediate conservation benefit to this section of the CP zone through the elimination of the existing and potential habitat disturbance caused by beam trawling, noting the two licence holders currently could increase their fishing effort within this area at any time.
- Commencement of the recovery of the benthic habitats within the area from trawling impacts would be immediate.
- Would enable eligible, affected T6 symbol holders to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the broader zoning plan review. No mitigation is currently payable to fishers who gradually relinquish their ability to trawl in this area.

Potential costs

- Immediate (upon commencement of the revised zoning plan) loss of income for the two fishers who currently meet the requirements to beam trawl in this location. However, the recent limited effort in the fishery suggests that this economic loss would be relatively minor.
- Cost to government to mitigate impacts to affected fishers that would be expected to include mitigation and structural adjustment (i.e. through the purchase of licences and symbols) to address potential effort transfer issues.

Option 3 would address community sentiment and the incompatibility of the impacts of beam trawling with the objects of a highly protected zone type. In relation to the loss of a source of bait, data suggests this would be minimal and there are other forms of fishing in the Great Sandy region which are expected to continue to provide a source of local bait for recreational fishing. While financial impacts on the two fishers would be immediate, these fishers would be eligible to access mitigation under the commercial fisheries impact mitigation package to be implemented as part of the broader zoning plan review.

Preferred approach to prevent damage to habitats from beam trawling

Option 3 is the preferred approach as it provides conservation benefits by immediately removing habitat impacts associated with beam trawling from this highly protected CP zone of the marine park. This aligns with the management intention, as per the current zoning plan provisions, to ultimately discontinue the activity from this area of the marine park. By enabling the eligible impacted T6 symbol holders to access mitigation under the commercial fisheries impact mitigation package, the economic impacts to these affected fishers can be addressed at this time as opposed to these fishers losing access to this area with no mitigation if they were to relinquish, sell or transfer their T6 beam trawl symbol under the current zoning plan provisions. Overall, a net benefit to Queensland is therefore assumed.

6.1.4 Damage to habitats from bloodworming in the Great Sandy Strait and Tin Can Inlet

The collection of bloodworms for use as bait is undertaken by both recreational and commercial fishers. To locate bloodworms, fishers use spades and large forks to turnover or dig up seagrass beds and other intertidal habitats to expose and collect the worms and other invertebrates. Temporary bund walls are often built with the excavated sediment to slow the flow of the incoming tide, especially by commercial fishers. Although potentially limited in the Great Sandy Marine Park (GSMP), the activity can create high levels of disturbance to intertidal habitats, especially vulnerable seagrass beds, and hence as part of standard marine park management, commercial bloodwormers require permission to operate in Habitat Protection (HP) and General Use (GU) zones of the marine park and cannot operate in the more highly protected zones under the standard provisions of these zones. Collection of bloodworms by recreational fishers can occur in General Use (GU), HP and Conservation Park (CP) zones.

The provisions of the designated Great Sandy Area currently override the standard provisions of the Conservation Park (CP) zone in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, allowing the commercial collection of bloodworms to occur without the need for a marine park permission within these waterways. However in contrast, and in recognition of the importance of habitat protection, Baffle Creek, Elliott River, large parts of the Burrum River system and parts of the Great Sandy Strait and Tin Can Inlet are declared

Fish Habitat Areas (FHAs) where the use of a digging implement, other than a yabby pump, to collect bait is prohibited under fisheries legislation (see Appendix 7 for declared FHA locations). This creates a situation where although bloodworming can be permitted to occur in the CP zone of the marine park in these waterways, the declared FHA management provisions prohibit the activity, effectively prohibiting the activity from being undertaken in these areas. The only part of the designated Great Sandy Area where the provisions that allow bloodworming to occur in the CP zone effectively apply, is within the parts of the Great Sandy Strait and Tin Can Inlet that are not within a declared FHA. These provisions highlight a key difference in the management of bloodworming and habitat protection in the marine park and FHAs, which this zoning plan review seeks to resolve.

Since the declaration of the marine park, catch records indicate minimal collection in the commercial bloodworm fishery within the marine park with that collection only occurring in the central parts of the Great Sandy Strait. There is however, potential for this effort to increase as bloodworms are a sought-after bait species. It is noted that the proposed removal of the designated Great Sandy Area would also result in the removal of provisions that allow commercial bloodworming to be undertaken within the CP zones of the Great Sandy Area waterways.

The options below aim to reflect declared FHA management and address habitat disturbance in the CP zone of the Great Sandy Strait and Tin Can Inlet (outside declared FHAs) are discussed below.

6.1.4.1 Option 1 – No change to zoning plan

This option would maintain the existing ability for the commercial bloodworm fishery to operate in parts of the CP zone in the Great Sandy Strait and Tin Can Inlet, noting that the activity, although permitted in the marine park under the designated Great Sandy Area provisions, is prohibited where declared FHAs are declared in Baffle Creek, Elliott River, large parts of the Burrum River system, parts of the Great Sandy Strait and Tin Can Inlet under fisheries legislation. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.1.4.2 Option 2 – Transitional provisions to phase out commercial bloodworming in the CP zone of the Great Sandy Strait and Tin Can Inlet

Transitional provisions can be included in a zoning plan to allow an activity that is incompatible with zone objectives to continue for a set period of time once a new zoning plan commences. Under this option commercial bloodworming would cease as an activity five years after the commencement of the revised zoning plan in the CP zone of the Great Sandy Strait in areas where no FHAs are declared. Note that in the parts of the Great Sandy Strait and Tin Can Inlet that are within declared FHAs and within Baffle Creek, Elliott River, and Burrum River system, bloodworming is currently prohibited under fisheries legislation. After this five year period commercial bloodworming in the relevant parts of the Great Sandy Strait would be a prohibited activity in accordance with the standard provisions of the CP zone.

Potential benefits

- Would provide a clear end point, from which time habitat disturbance from bloodworming will not occur.

Potential costs

- Potential increase in effort within the Great Sandy Strait prior to the transitional period ending, resulting in increased habitat disturbance.
- Commencement of the recovery of the benthic habitats within the area from ongoing impacts from bloodworm harvesting would be delayed by five years.
- Potential transfer of effort to other areas within the marine park during the transitional period and/or once the transitional provisions end, increasing habitat disturbance in these areas, where fishers may not have previously operated.

Option 2 would allow for the continuation of an activity that is not in keeping with the objects of a highly protected zone type. However, this option would allow fishers to continue to benefit economically from the activity for a further five years with time to restructure their business and continue to provide a local source of bait for recreational fishers during the transition period, minimising potential biosecurity risks associated with the use of non-local bait. Throughout, and at the end of the five-year period, any fishers utilising the area would not be eligible for mitigation under the commercial fisheries impact mitigation package to be implemented as part of the broader zoning plan review.

6.1.4.3 Option 3 – Prohibit commercial bloodworming immediately in the CP zone of the Great Sandy Strait and Tin Can Inlet

This is the preferred option that is reflected in the draft zoning plan

Under this option the current provisions allowing commercial bloodworming to occur in the CP zone of the Great Sandy Strait and Tin Can Inlet, in areas where no declared FHAs are declared, would be removed from the zoning plan. The standard provisions of the CP zone that prohibit commercial bloodworming would apply.

Potential benefits

- Would deliver an immediate conservation benefit to this CP zone by eliminating the benthic habitat disturbance caused by this form of fishing.
- Commencement of the recovery of the benthic habitats within the area from the ongoing impacts from bloodworm harvesting would be immediate.
- Affected fishers would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the broader zoning plan review, which would include the management of risks associated with effort transfer.

Potential costs

- Immediate (upon commencement of the revised zoning plan) loss of income for fishers currently bloodworming in the parts of the Great Sandy Strait that are not within a declared FHA. The scale of loss cannot be quantified by DES due to limitations of available fisheries data.
- Cost to government to mitigate impacts to affected fishers involving mitigation and structural adjustment (i.e. through the purchase of licences and symbols) to address potential effort transfer issues.

Option 3 would reflect declared FHA management and address current and potential disturbance of vulnerable seagrass habitats and other intertidal habitats from the impacts of bloodworming in a highly protected zone type. In relation to the loss of a source of local bait, other forms of fishing in the Great Sandy region are expected to continue to provide a local source of bait for recreational fishing. While financial impacts on affected fishers would be immediate, these fishers would be eligible to access mitigation under the commercial fisheries impact mitigation package to be implemented as part of the broader zoning plan review.

Preferred approach to prevent damage to habitats from bloodworming.
Option 3 is the preferred approach as it is assumed a net benefit to Queensland will be provided by immediately removing the impacts of current and potential bloodworming to vulnerable habitats within this highly protected zone of the marine park, and better reflecting the overall management of these waterways from both a marine park and declared FHA management perspective, while enabling the eligible impacted fishers to access mitigation under the commercial fisheries impact mitigation package.

6.1.5 Protection of creek mouths subject to dynamic coastal processes

Coonarr Creek south of Elliott Heads, and Coongul, Awinya and Wathumba Creeks on the western shoreline of K'gari are each recognised as ecologically significant waterways. This is reflected in their current status as Conservation Park (CP) zones.

The mouths of each of these creeks are subject to highly active coastal processes which result in their constant reshaping and at times, significant changes to the locations at which they discharge into Hervey Bay. At present the downstream boundaries of the CP zones in each of these creeks extend across each creek mouth, based on the location of those creek mouths when the marine park was declared in 2006.

As an example, the natural movement of the mouth of Coongul Creek has resulted in the CP zone boundary in this area, no longer aligning with the current location of the creek mouth (Figure 7). This creates significant uncertainty in relation to the location of this downstream boundary for marine park users, which is highly undesirable from a marine park management perspective. CP zones are highly protected marine park zones which impose significant restrictions on some forms of commercial fishing and development related uses. As such, unclear or illogical boundaries for CP zones can result in complex compliance and enforcement issues.

Figure 7. Current boundary of Conservation Park zone at Coongul Creek.

Each of these small, relatively shallow creeks provide extensive habitat for mobile fauna (e.g. fish) during high tide periods, but there is often significant movement of this fauna out of the creek mouths as the tide recedes. While the CP zone provisions preclude the use of commercial fishing nets (with the exception of bait nets) within these zones, the current location of the downstream CP zone boundaries allow for commercial fishing nets to be lawfully used in close proximity to the creek mouths, potentially resulting in the comprehensive capture of these fish as they leave the protected waterways with the receding tide. While this outcome may support efficient fishing outcomes, it is not effectively supporting the ecosystem protection that is intended to be provided by the CP zones within these creeks.

In summary, the current alignments of the downstream CP zone boundaries within these four creeks are not effectively accommodating the dynamic coastal processes that influence their mouths, are not logical which results in misunderstanding and compliance issues and are not effectively supporting the marine park management of the ecosystem and conservation values within each waterway.

6.1.5.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements. There would be no changes made to the location of the downstream boundaries of the CP zones within each of the creeks which would not address the problems identified. This option is the base case against which option 2 is assessed.

6.1.5.2 Option 2 – Extension of the four CP zones beyond the creek mouths

This is the preferred option that is reflected in the draft zoning plan

This option would extend the downstream CP zone boundaries within Coonarr, Coongul, Awinya and Wathumba Creeks offshore a distance of approximately 500m from the creek mouths and a suitable distance to the north and south of the existing creek mouths to accommodate longshore creek mouth movement over time. These boundary changes would ensure that the creek mouths and the coastal processes and ecological functions that occur at the junction of these creeks with Hervey Bay are entirely protected within the CP zones. The selection of ‘approximately 500m’ as the proposed offshore extent of these zones is consistent with the distance that has been applied for a number of other foreshore zone boundaries around the park.

This option would also support improved conservation of the ecosystem values within the CP zones within each creek by removing the ability for commercial fishing nets to be positioned in close proximity to the creek mouths. Figure 8 illustrates how the boundary of the CP zone within Coongul Creek would be realigned under this option.

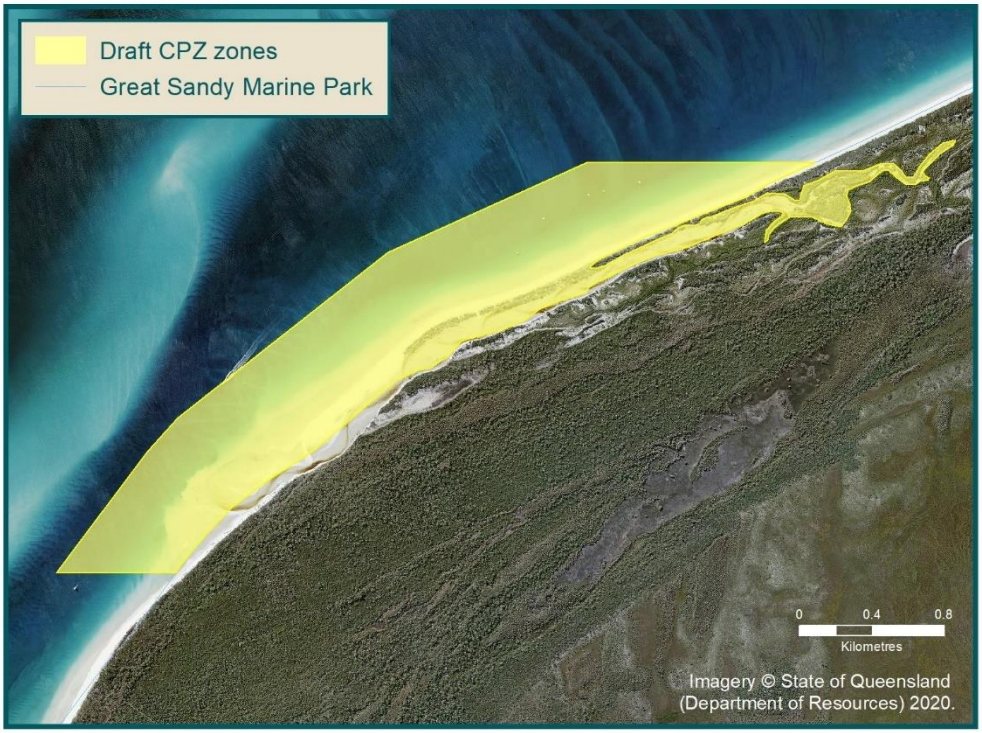


Figure 8. Boundary of proposed realigned Conservation Park zone boundary at Coongul Creek.

Potential benefits

- Accommodates the dynamic coastal processes that affect the mouths of each creek by providing scope for the location and shape of the creek mouths to change over time, while being retained and protected within each CP zone boundary.
- Provides a boundary that is logical and that can be easily defined on the ground. This would support improved public understanding of the boundary location and compliance.
- Improves conservation of the ecosystem values within the CP zones within each creek by removing the ability for commercial fishing nets to be positioned in close proximity to the creek mouths where these nets can directly and efficiently intercept fauna that is entering or leaving these waterways.

Potential Costs

- Potentially reduces the commercial catch from the net fishery from within the vicinity of each creek, which is likely to impact on local net fishing businesses (noting that the areas of Hervey Bay in the vicinity of Coonarr, Coongul, and Awinya Creeks are productive net fishing locations, and it is understood that this net fishing effort is particularly associated with these creek mouths).
- Cost to government to mitigate impacts to affected fishers involving mitigation and structural adjustment (i.e. through the purchase of licences and symbols) to address potential effort transfer issues.

Option 2 would provide CP zone boundaries at each of the four creeks that will effectively accommodate the dynamic coastal processes that cause their mouths to move and reshape over time, support improved public understanding of the boundary location and result in improved protection of the conservation of the ecosystem values within each waterway. These changes would ensure that these CP zones more effectively deliver their intended objectives of conserving the values within these waterways and limiting extractive use. However, delivering these outcomes are likely to result in impacts to the commercial net fishing sector. Impacted fishers would be eligible to access mitigation under the commercial fisheries impact mitigation package to be implemented as part of the broader zoning plan review.

<u>Preferred approach</u> for the protection of creek mouths

Option 2, being extension of the four CP zones (see Appendix 4 for a map of the proposed zones) beyond the creek mouths, is the preferred approach. These CP zones have been in place since the marine park was declared, however the current alignment of their downstream boundaries is not effectively supporting their conservation and limited extractive use management objectives. The proposed extensions to the CP zone boundaries provide a simple and effective solution. It is expected that these changes would result in impacts to the commercial net fishing sector, however the extent of those impacts is difficult to assess due to the resolution limits of available data. Detailed advice on the net fishing practices that are conducted in the vicinity of these four creeks and the likely impacts to the net fishing sector from the implementation of this option are sought through consultation on this RIS.

6.2 Conflict in waterways of the designated Great Sandy Area

6.2.1 Issue

Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet are all waterways that are universally accepted by researchers, land and water managers and the community as containing high ecological values. For example, the Great Sandy Strait is an internationally important wetland under the Ramsar Convention, it includes part of the K'gari (Fraser Island) World Heritage Area (WHA) and is proposed for WHA listing in its own right. The Burrum River, Great Sandy Strait and part of Tin Can Inlet form part of a Dugong Protection Area, declared in 1998 under fisheries and nature conservation legislation, in recognition of the habitat values that these waterways provide to this threatened species. Baffle Creek is one of the few major waterways in southern Queensland which is not regulated by a significant water impoundment structure and all four waterways contain extensive networks of declared Fish Habitat Areas (see Appendix 7).

In addition to their high ecological values, each of these waterways are also highly productive fishing grounds and have a long history of use by commercial, recreational and traditional fishers.

When the current zoning plan was developed in 2006, developing suitable zoning arrangements for these waterways, that balanced both their fishing and habitat/ecological values, presented a particular challenge and was the subject of intense stakeholder debate.

The zoning solution ultimately implemented, and that currently exists, was to:

- Select core habitats within some of the waterways and create Marine National Park (MNP) zones to provide those areas with the highest level of habitat protection and to exclude all extractive uses (including all recreational and commercial fishing).
- Create a customised management arrangement for the remaining areas of these waterways, that utilises an underlying Conservation Park (CP) zone to recognise and provide a high level of protection for the ecological values, overlaid with a designated area (the Great Sandy Area) in combination with non-conforming use provisions. These override the standard CP zone restrictions in relation to fishing, allowing various commercial and recreational fishing activities to occur in these waterways.

Specifically, the designated Great Sandy Area allows commercial net fishing to occur where, except for bait netting, it would normally be prohibited by the underlying CP zone. Both commercial and recreational line fishers are allowed to use up to three rods/ hand-held lines and six hooks, whereas the CP zone management would normally limit fishers to only one rod/ hand-held line and one hook. A non-conforming use provision, which applies to the same CP zones as the designated Great Sandy Area, also allows commercial crabbers to use commercial quantities of crab pots (50 -100 per fisher, depending on individual fishing licence conditions) whereas, without this non-conforming use provision, the underlying CP zone would render commercial crabbing unviable through its limit of four crab pots per person.

Consistent with the provisions of the *Native Title Act 1993*, Traditional Owners are not limited by the zoning plan in relation to undertaking traditional fishing.

The provisions of the designated Great Sandy Area that allow commercial net fishing within the CP zones of these waterways have been highly contentious since the current zoning plan was created. This conflict between the recreational fishing sector (supported by the conservation sector) and the commercial fishing sector has not subsided over time and as a result, is eroding community confidence in the ability of the marine park's management to achieve conservation outcomes for biodiversity including the protection of threatened species and to separate incompatible uses and maximise opportunities for enjoyment and benefit from the marine environment.

From responses to the 2019 discussion paper, the current management of commercial fishing within these waterways is one of the most significant issues of concern from respondents in relation to the management of the marine park. As part of the consultation process, a petition was submitted to Parliament from the recreational fishing sector with over 20,000 signatures, calling for the removal of the designated Great Sandy Area to prohibit commercial net fishing from the CP zones within the Great Sandy Area waterways. Approximately 460 signatures were also received on a petition to remove commercial nets from the Burrum River in particular, and over 1000 emails seeking the removal of the designated Great Sandy Area were received from members and associates of a major conservation organisation.

Conservation-based concern regarding the risks that commercial fishing nets present to threatened species in the Great Sandy Area waterways is one of a number of issues that is driving the conflict. Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet all provide important habitats for threatened species and are consistently utilised by these species. The Great Sandy Strait is core habitat for dugong, turtles and two small resident populations of Australian humpback dolphins. Other threatened species (e.g. other whale species) also frequent the Strait. Dugong and turtles are commonly found in the Burrum River system, particularly within the lower reaches. Reports of dugong in the Elliott River and Baffle Creek are less common, but still occur, however these two waterways provide important habitat for turtles, particularly green turtles. A population of Australian humpback dolphins, separate from those in the Great Sandy Strait, frequently utilises the mouths and lower reaches of the waterways between Baffle Creek and the northern end of the Great Sandy Strait, including the Elliott and Burrum Rivers, as key feeding habitats.

A threatened species is one that is at risk of extinction. For these species, the preventable mortality of even a small number of individuals can be significant to the maintenance of their population and to the success of their recovery. For the dugong population within the Great Sandy Marine Park (GSMP), the mortality of as few as nine individuals per year from human induced causes (e.g. capture in nets, boat strike) could affect the long-term viability of the population and for the Great Sandy humpback dolphin populations their viability could be threatened by the mortality of as few as 1-2 individuals from such causes.

Marine parks perform a key function in the protection of threatened marine species by providing a primary mechanism for delivering on-ground actions to address the requirements of state and Commonwealth threatened species legislation, address Australia's obligations under international threatened species agreements and implement species recovery plans.

A level 2 ecological risk assessment of the large mesh net component (gill nets and ring nets) of the East Coast Inshore Fin Fish Fishery, conducted by Department of Agriculture and Fisheries (DAF) in 2021 (ECIF Large Mesh SOCC Level 2 ERA), concluded that large mesh gill nets and ring nets present a higher risk of entanglement and mortality to a range of threatened species that utilise the Great Sandy Area waterways, compared to other netting apparatus (e.g. bait nets, tunnel nets, set pocket nets).

The recreational fishing and conservation sectors identify the risk that commercial net fishing presents to threatened species as one of their key concerns with net fishing being allowed to occur in these waterways. However, these threatened species related concerns are only one component of a collection of issues that are driving conflict in relation to the current management of the Great Sandy Area waterways.

Concerns, particularly from the recreational fishing sector, regarding the impacts that net fishing is having on the sustainability of fish stocks, catch allocation between the fishing sectors and commercial netting not being the best use of the public fisheries resources in these waterways from a regional economic benefit perspective, are also key factors underpinning the conflict. While these are core fisheries management issues, that are primarily the management responsibility of DAF through the administration of the *Fisheries Act 1994,* they are difficult to separate between management agencies if an integrated and broadly supported solution to the management of these waterways is to be achieved.

The Queensland government is seeking to address the revision of the management of the Great Sandy Area waterways in a manner that considers all issues that are driving the conflict through the review of the GSMP zoning plan. Due to the multi-agency responsibility for these matters a set of 'across agency' principles have guided the development of potential solutions to address the conflict. These principles identify that the solution for these specific waterways should:

- enhance the region's recreational fishing lifestyle
- facilitate future regional economic growth based on nature-based tourism and recreational, charter and sport fishing
- reduce risks from commercial netting to threatened species

- incorporate initiatives that mitigate impacts to affected commercial fishers and avoid effort transfer.

The options discussed below (other than the no change option) reflect this Government position.

Consultation feedback to date

The recreational fishing sector, supported by key conservation groups and some community groups, generally seeks the prohibition of commercial net fishing from the designated Great Sandy Area waterways with the impacts upon affected commercial fishers to be fairly mitigated.

These stakeholders raise concerns that commercial netting in these waterways is:

- depleting fish stocks to unsustainable levels
- impacting on the ecological values of the area
- impacting on recreational fishing opportunities and future economic sustainability of the region
- causing unacceptable risk to threatened marine species (e.g. dugong and turtles).

Many of these stakeholders suggest that the improved recreational fishery that would result from removing commercial net fishing pressure from these waterways would drive tourism to the region, generating economic benefits that would outweigh the existing value of the commercial net fishery in the marine park, especially over time.

The recreational fishing and conservation sectors do not raise significant concern with the continuation of commercial crabbing within these waterways, although some feedback suggests that only crab fishers with a long catch history in the area should be allowed to fish in these waterways.

The commercial fishing sector strongly supports the continuation of all existing commercial fisheries within the designated Great Sandy Area waterways either via the retention of the existing designated area and non-conforming use provisions, or via an improved mechanism that overcomes the perception that commercial fishing in these waterways is an ‘anomaly’ rather than a legitimate use.

Commercial fishers highlight:

- their importance in providing fresh local seafood for purchase by the general public
- the value of their businesses to the regional economy through direct employment, and creating business activity which supports local industries and other businesses
- their long history of stewardship and sustainable fishing within these waterways
- the important contribution that commercial fishing delivers to the culture and social fabric of the region.

The problem

In summary, the significant and ongoing conflict between the recreational fishing sector (supported by the conservation sector and a broad section of the community) and the commercial fishing sector, regarding the social and ecological (including threatened species) impacts of commercial net fishing within the Great Sandy Area waterways and the compatibility of netting with the existing highly protected management status of these waterways, is eroding community confidence in the marine park’s management.

While there are a range of factors (conservation, fisheries management, social and economic) that underpin this conflict, many of which are not the core responsibility of the department, the management provisions of the designated Great Sandy Area are widely viewed by the community as the primary source of these issues and the resulting conflict. The sustained conflict is evidence of the failure of the current marine park management of these waterways to deliver the purpose of the Marine Parks Act, that is, the conservation of the marine environment, in a manner that effectively balances conservation and use and engenders public support**.**

This divisive issue requires resolution to improve broadscale community support and confidence in the ongoing management of the marine park.

6.2.2 Option 1 – No change to zoning plan

This option would maintain the existing designated Great Sandy Area. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.2.3 Option 2 – Remove designated Great Sandy Area and prohibit <u>all</u> commercial netting from the CP zones within the Great Sandy Area waterways

This option to address the conflict would be underpinned by the removal of the designated Great Sandy Area from the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet. Removing this designated area would prohibit all forms of commercial net fishing (except bait netting) from the CP zones within these waterways. However, bait netting, which is typically allowed under the standard provisions of all CP zones in Queensland's marine parks, would also be specifically prohibited from the CP zones within these waterways (only), via a new zoning plan provision.

Within the Burrum River system the sections of the current CP zone that extend over the Cherwell River and the upstream reaches of the Burrum River are proposed to be rezoned as Habitat Protection (HP) zone to allow for improved management of coastal development issues in those areas (refer to section 6.6). The standard provisions for a HP zone would normally allow for commercial netting to be conducted in this new HP zone, however under this option, a new zoning plan provision would be introduced to specifically prohibit all forms of commercial netting from this new HP zone. While these upstream areas are not currently subject to significant net fishing effort, specifically prohibiting large mesh gill nets and ring nets from this new HP zone would ensure that netting effort would not transfer into these areas following its prohibition in other areas under this option.

The removal of the designated Great Sandy Area would result in the existing provisions that allow line fishers to use up to three lines and six hooks per person in the CP zones within the Great Sandy Area waterways also being removed. Under this option all line fishers (commercial and recreational) would be allowed to use two lines and two hooks per person within these CP zones. This 2-line and 2-hook allowance would also be applied more generally across all CP zones in the marine park to create management consistency and would be implemented via a modification to the standard provisions for CP zones in the GSMP.

The removal of the designated Great Sandy Area would also result in the removal of provisions that allow commercial bloodworming and yabby harvesting (by a small number of specific fisheries authority holders) to be undertaken within the CP zones of the Great Sandy Area waterways. These minor commercial bait collection fisheries are not a key factor in relation to the current stakeholder conflict in these waterways. Options for the future management of the bloodworm fishery in the Great Sandy Area waterways are discussed separately in section 6.1.4. The designated Great Sandy Area provisions that apply to the commercial yabby fishery would be converted to a non-conforming use provision and would allow for holders of fisheries authority numbers 1435 or 3464 to continue to commercially harvest yabbies within the CP zones of the Great Sandy Area waterways, without the requirement to hold a marine park permission. This solution would ensure that these yabby fishers retain their existing use rights without any additional regulatory burden.

The commercial crab fishery that currently occurs within the CP zones within the Great Sandy Area waterways under a non-conforming use provision has not been identified as a significant contributor to the stakeholder conflict in these waterways and would continue under this option, through the retention of that non-conforming use provision. The non-conforming use provision would be modified to remove the current requirement for fishers to also hold a marine park permission to crab within these waterways. The existing requirement for commercial crabbers to hold a marine park permit to crab within the Great Sandy Area waterways is now considered to be an unnecessary regulatory burden, given the existing licencing requirements that apply to the fishery under fisheries legislation.

To mitigate the significant impacts to the commercial fishing and post-harvest sector that would result from the management changes proposed under this option, a commercial fishery impact mitigation package and re-training package would be developed in consultation with industry. The package is expected to include:

- financial mitigation for eligible fishers
- buyback of fishing entitlements to address displacement of fishing effort and to provide an opportunity for affected fishers to exit the industry
- purchase of quota units for some species
- support for eligible post-harvest seafood businesses to adapt to changed or reduced seafood supply.

Potential benefits

- Eliminates competition for catch of fin fish between the recreational and commercial fishing sectors within these waterways. This would remove a significant source of the conflict between the fishing sectors.
- Retains approximately 228,000kg* of fish (based on average catch data from 2018-2020) currently removed by the commercial net fishery from the ecosystem within these four waterways each year, which is expected to:

    - support a more natural, functioning ecosystem within these waterways
    - improve recreational fishing opportunity within these waterways (noting that the subsequent increased recreational catch would likely offset some of ecological and sustainability benefits of removing the net fishery)
    - support the sustainability of fish stocks within these waterways and enhance the stocks of some fish species from a regional perspective.

  *this is approximately 50% (by weight) of the total annual net catch from the East Coast Inshore Fin Fish Fishery commercial net fishery in the Wide Bay Region
- Supports increased recreational fishing-based regional economic activity (e.g. tourism, bait and tackle, vessel and equipment sales, etc.), which over time has the potential to deliver regional economic benefits that may ultimately be greater than the value of the existing commercial net fishery in these waterways.
- Eliminates the risk of fishing net entanglement and mortality for threatened species within these waterways.
- Delivers a balanced and consistent outcome in relation to the number of lines and hooks that can be used by line fishers that will be applied across all CP zones within the park.

Potential costs

- Removes these waterways as a significant source of local inshore fish (removing approximately 228,000kg fish per year (GVP of approximately $2.1m per year with the retail value significantly higher) for purchase by the public, either directly from seafood retailers or via the hospitality sector. These waterways contribute a significant proportion of the catch of some species from a statewide perspective (e.g. sand/summer whiting) and therefore the removal of all netting may result in a reduction in supply of those species with impacts beyond the Wide Bay Region.
- Reduces the commercial net catch taken in the East Coast Inshore Fin Fish Fishery within the Wide Bay Region by approximately 50% (by weight), resulting in significant impacts to local net fishing businesses to the extent that their commercial viability will be significantly compromised. These impacts would be in addition to impacts that result from other proposed zoning changes (e.g. the expanded MNP zone network and changes to the boundaries of CP zones in some locations as described in section 6.1.1.3). The potential for this cumulative impact has been recognised and would be addressed via an impact mitigation package for affected fishers.
- Reduces seafood supply to local post-harvest seafood businesses requiring adaptation or downsizing of their operations. This impact has also been recognised and the impact mitigation package would include funding to assist affected businesses to adapt to this change.
- Requires substantial cost to government to fund an impact mitigation package. The mitigation of the impacts from this option would account for the largest portion of funding from an overall commercial fishery impact mitigation package compared to any other options for change discussed in this RIS.
- A cost to government of approximately $35,000 annually to enforce the prohibition of commercial netting in these waterways.
- Direct loss of jobs from the net fishing sector and potentially from the local post-harvest businesses.
- Reduces business activity for local commercial fishery support industries such as net makers, chandleries, transport companies, marine mechanics and engineers/fabricators.
- Potential loss of identity and psychological impacts, particularly for generational fishers affected by the change including those who may need to leave the area to find alternative employment.
- Impacts to the culture and identity of some of the small villages and communities that surround the waterways of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet with a history strongly associated with commercial net fishing.

In summary this option would:

- address the conflict between the fishing sectors in the Great Sandy Area waterways in a manner which aligns with the ‘across agency’ principles
- facilitate an improved recreational fishery
- completely eliminate the risks that the use of commercial fishing nets within these waterways present to threatened species
- improve the overall ecological functioning of the waterways.

However, implementation of option 2 would result in very high impacts to the commercial net fishing sector within the Wide Bay Region and the complete loss of these productive waterways as a source of fish for purchase by the general public. The impact mitigation package required to address the impacts to directly affected commercial fishers and the post-harvest sector would be substantial and is unlikely to fully address the sociological impact that some commercial fishers may experience (e.g. the loss of identity that may accompany the need to leave the commercial fishing sector). Over time the improved recreational fishery that would result from the implementation of this option will contribute to increased recreational fishing-based regional economic activity that may ultimately

deliver regional economic benefits greater than those provided by the existing commercial net fishery.

6.2.4 Option 3 – Remove designated Great Sandy Area but only prohibit commercial netting with large mesh gill nets and ring nets from the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet

This is the preferred option that is reflected in the draft zoning plan

This option would also remove the designated Great Sandy Area, however only commercial net fishing with large mesh gill nets and ring nets (operating under N1 and N2 fishery symbols) would be prohibited from the CP zones within the Great Sandy Area waterways after the designated Great Sandy Area is removed.

The following net fisheries within these waterways would be retained:

- commercial netting using bait (small mesh) nets (N11 fishery symbol) in the CP zones, in accordance with the standard provisions that apply to this zone type[1], noting the general prohibition on the take of bream, whiting and flathead with a bait net in a CP zone within the GSMP would continue to apply
- the set pocket net fishery conducted in the CP zone within the lower reaches of the Mary River
- the tunnel net fishery (N10 fishery symbol) conducted in the CP zone within parts of the Great Sandy Strait and Tin Can Inlet, of which there are currently six fishers licenced to operate.

[1]Current commercial catch from bait (small mesh) nets (N11 fishery) within these waterways is not separately identifiable in the commercial logbook data, but is expected to be a minor component of the overall net catch.

The designated Great Sandy Area provision that currently allow the set pocket net and tunnel net fisheries to occur in these locations would be converted to non-conforming use provisions after the designated Great Sandy Area was removed. As is the case for the current designated Great Sandy Area provisions, set pocket net and tunnel net fishers would not require a marine park permit to operate under this new non-conforming use provision.
The prohibition of large mesh gill nets and ring nets would also be applied to the sections of the Cherwell River and the upstream reaches of the Burrum River that are within the current designated Great Sandy Area and are proposed to be rezoned from CP zone to HP zone (refer to section 6.6) and would be implemented via a new zoning plan provision. Bait netting would be allowed to continue within this HP zone.

Prohibiting only the large mesh gill nets and ring nets is a more refined approach that aims to specifically target the commercial net fishing apparatus that presents the greatest risk of entanglement and mortality to threatened species within these waterways (refer to section 6.3.3.2) and is of most concern to recreational fishers (from a conflict perspective) and the conservation sector. While this option is more targeted, prohibition of these large mesh and ring nets would still result in a very significant reduction in net catch, as the vast majority of the net catch within these waterways is taken with these nets. These significant reductions (estimated to be >90%) in commercial net catch would still support significantly enhanced recreational fishing opportunities within these waterways and a shift towards a local economy based on nature-based tourism, recreational, charter and sportfishing in accordance with the ‘across agency’ principles.

While tunnel netting, set pocket netting and bait (small mesh) netting are not without some risk to threatened species, those risks are lower than for large mesh gill nets and ring nets. The retention of these lower risk commercial net fishing methods would allow for some local fish and prawns (from the set pocket net fishery) to be sourced from these waterways for purchase by the public for consumption or bait purposes.

As for Option 2:

- The current designated Great Sandy Area provisions that allow commercial and recreational line fishers to use three rods/hand-held lines and six hooks per person would be modified to allowed to use of only two rods/hand-held lines and two hooks per person within these CP zones. This outcome would be implemented via a modification to the standard provisions for CP zones and would apply to all CP zones across the park.
- The commercial bloodworm fishery would be prohibited from the CP zones within the Great Sandy Area waterways (refer to section 6.1.4 for further discussion).
- The small scale commercial yabby fishery conducted within the CP zones in the Great Sandy Area waterways by the holders of fisheries authority numbers 1435 or 3464, would be allowed to continue via a new non-conforming use provision. As is the case with the current designated area provisions, this non-conforming use provision would not require these two authority holders to also hold a marine park permission.

- The commercial crab fishery that currently occurs within the CP zones within the Great Sandy Area waterways under a non-conforming use provision would be retained but the current requirement for fishers to also hold a marine park permission to crab within these waterways would be removed.

The impacts of this option on the commercial fishing and post-harvest sectors would also be mitigated via a commercial fishery impact mitigation package and re-training package, developed in consultation with industry, that is expected to include:

- financial mitigation for eligible fishers
- buyback of fishing entitlements to address displacement of fishing effort and to provide an opportunity for affected fishers to exit the industry
- purchase of quota units for some species
- support for eligible post-harvest seafood businesses to adapt to changed or reduced seafood supply.

Potential benefits

- Significantly reduces competition for catch of fin fish between the recreational and commercial fishing sectors within these waterways, as most of the commercial net fishing effort would be removed.
- Retains approximately 220,000 kg* of fish (based on average catch data from 2018-2020) that are currently removed by commercial fishers using large mesh gill nets and ring net nets from the ecosystem within these four waterways each year, which is expected to:
    - support a more natural functioning ecosystem within these waterways
    - improve recreational fishing opportunity within these waterways (noting that the subsequent increased recreational catch would likely offset some of ecological and sustainability benefits of removing the net fishery)
    - support the sustainability of fish stocks within these waterways and enhance the stocks of some fish species from a regional perspective.

  **This represents approximately 48% (by weight) of the total annual net catch from the East Coast Inshore Fin Fish Fishery commercial net fishery in the Wide Bay Region*
- Supports increased recreational fishing based regional economic activity (e.g tourism, bait and tackle, vessel and equipment sales etc), which over time has the potential to deliver regional economic benefits that may ultimately be greater than the value of the existing commercial net fishery in these waterways.
- Significantly reduces the risk of fishing net entanglement and mortality for threatened species within these waterways by removing the commercial net fishing methods that present the greatest risk of entanglement and mortality to threatened species.
- Delivers a balanced and consistent outcome in relation to the number of lines and hooks that can be used by line fishers that will be applied across all CP zones within the park.

Potential costs

- Significantly reduces (by an estimated 90% or more) the availability of fish sourced from these waterways for purchase by the public (either directly from seafood retailers or via the hospitality sector), noting that these waterways contribute a significant proportion of the catch of some species from a statewide perspective (e.g. sand/summer whiting) and therefore may result in a reduction in supply of those species with impacts beyond the Wide Bay Region.
- Reduces the commercial net catch taken in the East Coast Inshore Fin Fish Fishery within the Wide Bay Region by approximately 48% (by weight), resulting in significant impacts to local net fishing businesses to the extent that their commercial viability may be significantly compromised. This reduced catch is estimated to have an annual GVP of approximately $2.0m. These impacts will be in addition to impacts that result from other proposed zoning changes (e.g. the expanded MNP zone network and changes to the boundaries of CP zones in some locations discussed in section 6.1.1.3). The potential for this cumulative impact has been recognised and would be addressed via an impact mitigation package for affected fishers.
- Reduces seafood supply to local post-harvest seafood businesses requiring adaptation or downsizing of their operations. This impact has also been recognised and the impact mitigation package would also include funding to assist affected businesses to adapt to this change.
- Requires substantial cost to government to fund the above components of the impact mitigation package. The mitigation of the impacts from a prohibition of the N1 and N2 net fishery from these waterways would account for the largest portion of funding of an overall package to mitigate the impacts of all the preferred changes discussed in this RIS that impact commercial fishers.
- A cost to government of approximately $35,000 annually to enforce the prohibition of large mesh gill nets and ring nets in these waterways.
- Direct loss of jobs from the net fishing sector and potentially from the local post-harvest businesses.

- Reduced business activity for local support industries such as net makers, chandleries, transport companies, marine mechanics and engineer/fabricators.
- Potential loss of identity and psychological impacts, particularly for generational fishers affected by the change who may need to leave the area to find alternative employment.
- Impacts to the culture and identity of some of the small villages and communities that surround the waterways of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet with a history strongly associated with commercial net fishing.

In summary, this option would:

- significantly reduce the interaction and resulting conflict between the fishing sectors in the Great Sandy Area waterways in a manner which aligns with the 'across agency' principles
- facilitate an improved recreational fishery
- substantially reduce the risks of threatened species entanglement by prohibiting the netting apparatus that has been assessed by DAF to present the highest risk
- improve the overall ecological functioning of the waterways.

While implementation of option 3 would result in high impacts to the commercial net fishing sector within the Wide Bay Region, it would allow for some forms of lower risk commercial netting to continue within the CP zone within these waterways, which may preserve some commercial net fishing businesses and still enable these waterways to provide a source of prawns and fish for purchase by the general public. The impact mitigation package required to address the impacts to directly affected commercial fishers and the post-harvest sector would be substantial. Over time it is assumed that the significant reduction in commercial catch from these waterways that would result from the implementation of this option will contribute to increased recreational fishing-based regional economic activity that is expected to deliver regional economic benefits that are greater than those provided by the existing commercial net fishery.

Preferred approach to resolve the conflict in the designated Great Sandy Area

Option 3 is considered to be a more balanced and targeted approach to addressing the conflict within the Great Sandy Area waterways, which is a key objective of this zoning plan review and therefore is the preferred approach. While significant impacts to the commercial net fishing sector will still result from this option and would need to be offset with a substantial impact mitigation package, these impacts and costs are expected to be less than for Option 2. Option 3 is therefore most likely to provide a net benefit to Queensland as it is expected that the improved conservation outcomes and consequent increased nature-based tourism and recreational fishing will enhance the regional economy. The current high value of these industries and experiences to the region, relative to commercial net fishing, is expected to increase under this option. Assessing the validity of these assumptions is a key objective of public consultation.

The removal of approximately 90% or more of the commercial net fishing catch that will result from the implementation of Option 3 would support a significant reduction in competition for catch between the fishing sectors, significantly improve recreational fishing outcomes within these waterways, create a more naturally functioning ecosystem and is likely to still be sufficiently significant to support flow-on recreational fishing based regional economic benefits.

Option 3's allowance of limited commercial net fishing, with apparatus that presents a low risk of entanglement and mortality for threatened species, would significantly reduce risks to threatened species within the Great Sandy Area waterways, while supporting the continuation of some commercial net fishing operations and the retention of these waterways as a limited source and prawns of fish for purchase by the general public.

6.3 Protection of threatened species

A number of nationally and internationally significant species rely on areas of core habitat within the marine park and spend all or part of their lifecycles in the park including migratory shorebirds, loggerhead and green turtles, dugong, grey nurse shark, Australian humpback dolphins, and the false water rat. Globally, nationally and in Queensland, these species face a wide range of threats and are therefore listed on numerous conventions and agreements. The natural populations of these species have declined to the extent that they are listed as threatened species in state and Commonwealth legislation. Table 5 outlines the conservation status of these species that are known to regularly frequent the Great Sandy Marine Park (GSMP).

Table 5. Status of threatened species regularly present in the Great Sandy Marine Park.

Species (common name)	***Nature Conservation Act 1992* (Qld)**	***Environment Protection & Biodiversity Conservation Act 1999* (C'wealth)**
Curlew sandpiper	Critically endangered	Critically endangered
Great knot	Critically endangered	Critically endangered
Red knot	Endangered	Endangered
Lesser sand plover	Endangered	Endangered
Eastern curlew	Endangered	Critically endangered
Northern Siberian bar-tailed godwit	Endangered	Critically endangered
Australian painted snipe	Endangered	Vulnerable
Greater sand plover	Vulnerable	Vulnerable
Western Alaskan bar-tailed godwit	Vulnerable	Vulnerable
Beach stone curlew	Vulnerable	N/A
Grey nurse shark	Endangered	Critically endangered (east coast population)
loggerhead turtle	Endangered	Endangered
leatherback turtle	Endangered	Endangered
hawksbill turtle	Endangered	Vulnerable
olive ridley turtle	Endangered	Endangered
flatback turtle	Vulnerable	Vulnerable
green turtle	Vulnerable	Vulnerable
dugong	Vulnerable	
Australian humpback dolphin	Vulnerable	
False water rat	Vulnerable	Vulnerable
Illidge's ant-blue butterfly	Vulnerable	
Ecological community of Subtropical & temperate coastal saltmarsh		Vulnerable

As a signatory to international conventions and agreements concerning protected species, habitats and ecosystems, Australia and therefore the State of Queensland has an obligation to implement policies and actions that reflect the objectives of these agreements. Of relevance to GSMP, these include the:

- Convention on Wetlands of International Importance (Ramsar Convention)
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
- Japan – Australian Migratory Bird Agreement (JAMBA)
- China – Australia Migratory Bird Agreement (CAMBA)
- Republic of Korea – Australia Migratory Bird Agreement (RoKAMBA).

Failure of contracting parties to meet obligations can undermine global environmental protection efforts for the particular species and may result in censure from the international community for a lack of action, which could lead to a lack of community confidence in the Government's management of threatened species.

Queensland also has an obligation to address relevant management actions identified in recovery plans or management statements prepared under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for listed threatened species. The Scientific Reference Group's (SRG) guiding principles reflect these obligations and recommend that areas important for vulnerable life-stages of species are protected in MNP zones and that species, populations and areas of special interest are included in MNP zones. Failure to address current and emerging threats and implement actions identified in threatened species management documents may lead to the continued decline of species to potential extinction at a local, regional or national level. Scientific research conducted since the GSMP zoning plan was prepared indicates that the current zoning and designated area arrangements are insufficient in providing protection to several species that utilise the marine park.

As well as implications for the species involved, insufficient levels of protection for threatened species and their habitats can affect the native title rights and interests of First Nations peoples whose cultural and spiritual beliefs and practices are closely linked with many of these species, especially turtles and dugong. In addition, the marine park's growing national and international reputation as a nature-based tourism destination presenting unique experiences with several threatened species such as turtle nesting tours at Mon Repos, whale watching in Hervey Bay and diving with grey nurse sharks at Wolf Rock relies on the health, abundance and distribution of these species improving over time.

6.3.1 Migratory shorebirds

6.3.1.1 Issue

The Great Sandy Marine Park (GSMP) provides important roosting and foraging habitat for both resident and migratory shorebirds, as well as nesting habitat for resident shorebirds. Most migratory shorebirds make an annual return journey of thousands of kilometres along the East Asian-Australasian Flyway that extends from breeding grounds in the northern hemisphere to non-breeding areas in the southern hemisphere, including across Australia. Between September and April high numbers of migratory shorebirds from more than 20 different species visit the marine park. During this time the Great Sandy Strait alone supports about 28,500 migratory shorebirds, including species in internationally significant numbers, making this the second most important site in Queensland for shorebirds. The importance of the marine park to the lifecycle of more than 20 species of these shorebirds has been recognised by inclusion of the Great Sandy Strait as a Wetland of International Importance under the Ramsar Convention.

The Australian Government's *Wildlife Conservation Plan for Migratory Shorebirds* lists habitat loss and modification and anthropogenic (human) disturbance as key threats to the survival of migratory shorebirds. A migratory shorebird's ability to complete long migration flights depends on the availability of habitats that provide for adequate and undisturbed roosting and feeding. Repeated disturbance (e.g. from aircraft, construction works and recreational activities such as fishing, driving on beaches, unleashed dogs and motorised watersports) prevents individual birds from replenishing the energy lost during their southern migration and from gaining the necessary weight to complete the return northern migration.

The current zoning plan includes a designated Shorebird Roosting and Feeding Area which aims to minimise disturbance to shorebirds, particularly migratory shorebirds, from human activities and domestic animals. The designated area encompasses the entire Great Sandy Strait /Tin Can Inlet, and four small locations (each approx. 0.7km^2) at Gables Point Rocks, Coongul Creek, Moon Point Bank, and Pelican Bank. Within these areas a person must not:

- take a dog into the area unless it is controlled or restrained in a way that prevents the dog from causing excessive disturbance to shorebirds; or
- navigate a vessel, or drive a vehicle, through a group of feeding or roosting shorebirds; or
- land, or take off, in an aircraft through a group of feeding or roosting shorebirds; or
- cause excessive disturbance to shorebirds or their habitat.

Shorebirds are most susceptible to disturbance during daytime roosting and foraging. To identify the marine park's significant roost sites, where birds congregate at high tide, data from the Queensland Wader Study Group and a number of other sightings databases was used to assess site significance against four criteria. Criteria related to the abundance of shorebirds, diversity of species and the number of threatened species supported by a site.

A site was considered significant if it regularly supports one or more of the following:

- 1%* or more of the East Asian-Australasian Flyway (EAAF) population of a species
- More than 2,000 birds (migratory and resident)
- 15 or more species (migratory and resident)
- 0.1%* of the EAAF population of species listed as threatened under the EPBC Act or the *Nature Conservation Act 1992*.

**This number varies between species – refer to Hansen et al (2016) for information on population thresholds.*

This process identified 62 significant roost sites throughout the marine park from over 150 sites known to occur in the Great Sandy Region. Of the 62 significant sites, four sites met three of the four assessment criteria and are therefore considered to be the most significant shorebird roost sites in the marine park. These roost sites are located at Moon Point, Maaroom, Boonooroo and Cooloola (Tin Can Inlet) and all provide habitat for species that are declining throughout the EAAF. The shorebird values of each of these four sites are summarised in Table 6.

Table 6. Values of the marine park's most significant shorebird roost sites.

Site	Values
Maaroom (0.3km2)	• 7 migratory species in nationally significant numbers: bar-tailed godwit; eastern curlew; great knot; red knot; terek sandpiper; curlew sandpiper; grey-tailed tattler • >4500 average bird count • 18 migratory species & 9 resident species
Boonooroo (0.2km2)	• 9 migratory species in nationally significant numbers: eastern curlew; bar-tailed godwit; lesser sand plover; greater sand plover; grey-tailed tattler; grey plover; red-necked stint; terek sandpiper; whimbrel • >3000 average bird count • 21 migratory species & 7 resident species
Moon Point (0.1km2)	• 4 migratory species in nationally significant numbers: bar-tailed godwit; eastern curlew; grey-tailed tattler; red-necked stint • >2000 average bird count, including large numbers of bar-tailed godwit • 14 migratory species & 4 resident species
Cooloola – Tin Can Inlet (0.5km2)	• 4 migratory species in nationally significant numbers: eastern curlew; bar-tailed godwit; lesser sand plover; whimbrel • >2500 average bird count • 22 migratory species & 6 resident species • nesting area for vulnerable beach stone curlew

Consultation feedback to date

Key feedback and suggestions to date include:

- General support for introducing park-wide rules to protect shorebirds and their habitat from intentional disturbance, similar to Moreton Bay Marine Park.
- The introduction of seasonal access restrictions at key high tide migratory shorebird roost sites, suggested by several leading ornithologists.
- Improved management of 4WD use in intertidal areas and current designated Shorebird Roosting and Feeding Areas.

The problem

Consistent with national trends, numbers of many migratory shorebird species are declining in the Great Sandy Strait, some by more than 10% per year. Globally, populations of the critically endangered eastern curlew and curlew sandpiper have decreased by 70-80% in the last decade. Loss and degradation of intertidal habitat in the Yellow Sea (China) has been linked to the significant decline of the EAAF population. However, actions taken locally to prevent disturbance to shorebirds and their habitat can assist in reversing the global declines of shorebird populations.

Disturbance is regularly recorded at almost half of the marine park's 62 significant shorebird roost sites. Under the current arrangements, no protection from disturbance is afforded to shorebirds that are feeding, nesting, roosting or transiting outside of the current designated area. Over one third (25) of the park's significant sites are located outside the current designated area. Additionally, the zoning plan affords no specific protection to highly significant sites, recognised as the most valuable in the marine park in terms of the abundance of birds, diversity of species and numbers of threatened species they support. Continuing under the current management regime places shorebird populations at higher risk of continued decline.

The options presented below seek to improve the protection of shorebirds from disturbance in the marine park, to address the problem of continued decline in shorebird populations.

6.3.1.2 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements for the protection of migratory shorebirds. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2, 3 and 4 are assessed.

6.3.1.3 Option 2 – Apply park-wide provisions to protect shorebirds from disturbance

This option involves removing the existing designated Shorebird Roosting and Feeding Area (located throughout Great Sandy Strait and Tin Can Inlet, Gables Point Rocks, Coongul Creek, Moon Point Bank and Pelican Bank)

and replacing it with special management provisions that prohibit disturbance of shorebirds across the whole marine park. These provisions would apply at all times of the year.

This management change would be complemented by an amendment to the definition of shorebird to only include species in the order Charadriiformes. The order Charadriiformes includes waders, gulls and terns that are dependent on the GSMP for a critical part of their life cycle, are seasonal migrants that depend on undisturbed feeding and roosting habitat, or species that breed locally.

The current designated area provision that prohibits a person causing excessive damage to the habitat of shorebirds would not be applied to the park-wide provisions. Habitat protection for shorebirds can be achieved through the entry or use provisions associated with each zone type, (for example those associated with undertaking works and a prohibition of commercial bloodworming in CP zones), plus the expanded network of MNP zones over intertidal feeding areas.

Potential benefits

- Shorebirds throughout the marine park, including areas outside the current designated area (25 significant roost sites), would be protected from disturbance, at all times of the year.
- Creates management arrangements that would be consistent with Moreton Bay Marine Park. Having similar provisions in place would assist in public education messaging for the two marine parks about the conservation significance of migratory shorebirds and the actions people need to take to help conserve them.
- Changes in the utilisation of sites by shorebirds (e.g. from sea level rise, shifting sandbanks) would be automatically accommodated, as the disturbance provisions would apply throughout the marine park irrespective of existing roost site location.
- Addresses actions in the *Wildlife Conservation Plan for Migratory Shorebirds*, several species specific national threatened species recovery plans and contributes to actions outlined in several international migratory bird agreements and the Ramsar Convention (see Appendix 8). This ensures activities to protect shorebirds are integrated and remain focussed on the long-term survival of migratory shorebird populations and their habitats, increasing the likelihood of their overall success in preventing further decline of shorebird numbers.
- Improved protection of shorebirds has the potential to contribute to local ecotourism opportunities and the economy of the region as birdwatching is a popular hobby and enthusiasts travel considerable distances to view birds of interest.

Potential costs

- Small impost on various users of the marine park to change their behaviour around shorebirds to avoid disturbing them.
- Cost to government (labour and operating) of approximately $10,000 annually to enforce provisions over the whole marine park (an increase of approximately $8,500/yr on enforcement costs for the current management of shorebirds).
- A maximum penalty of 100 penalty units is proposed for non-compliance with the park-wide management provisions to protect shorebirds. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

In summary, this option would address the lack of protection from disturbance for shorebirds feeding, nesting, roosting or transiting outside of the current designated area, where over a third (25) of the marine park's significant roost sites exist. While Option 2 would provide an improvement in the overall protection of shorebirds across the marine park, alone it would not recognise and specifically manage the value of the marine park's most significant sites for shorebirds.

6.3.1.4 Option 3 – Establish a new designated area (Seasonal Shorebird Closure Area) that seasonally closes access to highly significant roost sites

This option would retain the existing designated Shorebird Roosting and Feeding Area (located throughout Great Sandy Strait /Tin Can Inlet, Gables Point Rocks, Coongul Creek, Moon Point Bank and Pelican Bank) and introduce an additional designated area type that seasonally closes access at the marine park's four most significant shorebird roost sites. These sites are: Moon Point, Maaroom, Boonooroo and Cooloola (Tin Can Inlet). The total area of the four sites would encompass approximately 1.06km^2 (0.02%) of the marine park and are shown in Appendix 6.

This option recognises the value of the park's most significant shorebird sites by removing the risk of disturbance from activities that may occur within or immediately adjacent to the roost site (e.g. dog-walking, kite-surfing, boating) during the times of the year when shorebirds are most vulnerable and therefore the impact of disturbance most detrimental. This option is consistent with the management approach used in the zoning plan for the Great Barrier Reef Coast Marine Park which seasonally restricts access to significant seabird sites and is consistent with the site based management approach used for other threatened species and associated threatening activities in the GSMP such as designated Go Slow Areas for turtle and dugong.

The designated area would:

- encompass each of the four most significant high tide roost sites and some adjacent low tide feeding area to act as a buffer where practical
- have restrictions in place from 1 September to 31 October and between 1 March to 30 April each year prohibiting access except:
    - in an emergency
    - for recognised persons conducting regular, systematic bird counts or research that is authorised as a priority for the management of the marine park and cannot be conducted elsewhere
    - for local government undertaking authorised pest management activities (e.g. mosquito control).

These two closure periods totalling four months in a period of 12 months would be applied, rather than eight months over the entire summer period when most shorebirds utilise the marine park to minimise impacts on users. In addition, to further minimise impacts at:

- Moon Point, which is a popular fishing location and anchorage, the designated area would be located at the northern part of Moon Point, away from the Sandy Point anchorage on the southern side of Moon Point
- Boonooroo and Maaroom, where there are approximately 320 and 200 residents respectively living close by or adjacent to the shorebird sites, the designated areas would be offset from property boundaries where possible and areas of accessible open foreshore left out of the designated area

The shorebird site at Cooloola is in a relatively remote part of the marine park in Tin Can Inlet that adjoins an undeveloped area. All areas currently have little or no lawful vehicle access, with the Moon Point site being adjacent to an area where vehicles are prohibited in the Great Sandy National Park.

Potential benefits

- Consistency with the site based management approach used for other threatened species in the marine park is expected to assist in raising awareness of the threats to shorebirds, and hence reduce disturbance.
- Implementing a higher level of protection at the four most significant shorebird sites during periods when shorebirds are most vulnerable, is expected to result in a greater reduction in both the frequency of disturbance and impact of disturbance on shorebird survival at these four most significant sites.
- Addresses actions in the *Wildlife Conservation Plan for Migratory Shorebirds*, several species specific national threatened species recovery plans and contributes to actions outlined in several international migratory bird agreements and the Ramsar Convention (see Appendix 8). This ensures activities to protect shorebirds are integrated and remain focussed on the long-term survival of migratory shorebirds populations and their habitats, increasing the likelihood of their overall success in preventing further decline of shorebird numbers.
- Improved protection of shorebirds has the potential to contribute to local ecotourism opportunities and the economy of the region as birdwatching is a popular hobby and enthusiasts travel considerable distances to view birds of interest.

Potential costs

- Some people who wish to walk north along the beach at Moon Point from the popular anchorage at the southern end of Moon Point would be unable to do so during the designated area closure period.
- Some of the approximately 320 and 200 residents living close by, or adjacent to, the proposed areas at Boonooroo and Maaroom, respectively, may also be impacted by the seasonal access restrictions, as they will not be able to walk along the intertidal area within the designated area adjacent to the townships. There may be some minor impacts to recreational fishing access at Boonooroo. At Maaroom, there are several properties that are directly adjacent to the foreshore area and again, people (including the local residents) will not be able to walk in the intertidal area that is within the designated area.
- Cost to government of approximately $11,000 annually to enforce provisions at the four sites.
- A maximum penalty of 100 penalty units is proposed for non-compliance with the Seasonal Shorebird Closure Area provisions. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

Option 3 recognises the value of the marine park's four most significant shorebird sites by implementing a higher level of protection to shorebirds from disturbance, during critical times, when shorebirds are depleted in energy after arrival in the marine park and immediately before departure, when they need to gain weight for their return journey to the northern hemisphere, than is currently afforded. The relatively minor imposition on local residents and visitors to the park is outweighed by the benefits to threatened species and potential local tourism opportunities. This option alone, however, does not address the lack of protection to shorebirds from disturbance that occurs at over one third (25) of the marine park's significant roost sites that are outside the current shorebird roosting and feeding area.

6.3.1.5 Option 4 – Combination of options 2 and 3

This is the preferred option that is reflected in the draft zoning plan

This option would implement options 2 and 3 in combination by:

- removing the existing designated Shorebird Roosting and Feeding Area (located throughout Great Sandy Strait /Tin Can Inlet, Gables Point Rocks, Coongul Creek, Moon Point Bank and Pelican Bank) and replacing with special management provisions that prohibit disturbance of shorebirds across the whole marine park (as described in section 6.3.1.3)
- amending the definition of shorebird to only include species in the order Charadriiformes (as described in section 6.3.1.3)
- introducing a new type of designated area (Seasonal Shorebird Closure Area) that seasonally closes access at the marine park's four most significant roost sites: Moon Point, Maaroom, Boonooroo and Cooloola (as described in section 6.3.1.4) (see Appendix 6).

Potential benefits

- As described in sections 6.3.1.3 and 6.3.1.4.
- Shorebirds throughout the marine park, including in areas outside the current designated Shorebird Roosting and Feeding Area (includes 25 significant roost sites), and at the four most significant shorebird roost sites would be protected from disturbance at all times of the year.
- The value of the marine park's most significant shorebird sites would be recognised and managed through a higher level of protection when shorebirds are most vulnerable to disturbance. The prohibition on access is expected to significantly reduce the frequency of disturbance to shorebirds at these four sites.

Potential costs

- As described in sections 6.3.1.3 and 6.3.1.4.
- Cost to government of approximately $21,000 annually to enforce provisions over the whole marine park (an increase of approximately $19,500/yr on enforcement costs for the current management of shorebirds).
- A maximum penalty of 100 penalty units is proposed for non-compliance with the park-wide shorebird provisions and the Seasonal Shorebird Closure area provisions. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

This option applies park-wide provisions to protect shorebirds from disturbance throughout the marine park while additionally recognising the value of the marine park's top four significant sites by implementing an additional level of protection at these sites. Given the small investment required to protect these threatened species, a net benefit to Queensland is expected. The conservation benefits for several threatened species, including species that are listed as critically endangered, expected to be achieved by reducing disturbance, outweigh the costs to government and the community.

<u>Preferred approach</u> to protect migratory shorebirds

Option 4 is the preferred option as it implements a balanced and precautionary approach to address the lack of protection to shorebirds outside the current designated shorebird roosting and feeding area by applying park-wide provisions to protect shorebirds from disturbance and recognises and manages the value of the marine park's four most significant sites by implementing an additional level of protection during critical times in the shorebirds' life history. This combination of management actions will be optimal at improving shorebird protection and best meets Australia's international obligations to implement local actions to assist in preventing shorebird population decline. The higher level of protection from disturbance for shorebirds during critical times at the marine park's four most significant shorebird sites that are utilised by a high number of birds, diversity of species and relatively high number of threatened species, in combination with general protection that will apply at the top four sites outside of the critical times and throughout the entire marine park all year round, is likely to have the most success at mitigating

declines in shorebird populations. Implementation of this option would clearly achieve an objective of the zoning plan review – *to improve the protection and conservation of threatened species.* Appendix 6 shows the location of the designated Seasonal Shorebird Closure Areas. Appendix 9 and Appendix 10 outline the proposed provisions and changes to the current zoning plan.

6.3.2 Grey nurse shark

6.3.2.1 Issue

Wolf Rock, near Double Island Point, is the most northern location of only four key aggregation sites for the critically endangered grey nurse shark in Queensland and the only known site in the Great Sandy Marine Park (GSMP). Wolf Rock is critically important to the viability of the Australian east coast population as it is the only known gestation site for pregnant females on the east coast. Around half of the mature female sharks that comprise the total east coast population of approximately 2000 individuals have been recorded at Wolf Rock. Of this number, there are an estimated 400 grey nurse sharks (mature males and females) in the breeding population. The grey nurse shark population is highly susceptible to low levels of human-induced mortality as this species reproduces at a late age (10-12 years) and has a low reproductive rate. Pregnant females have a gestation period of about 12 months and spend the majority of that time around Wolf Rock before departing to their pupping waters in New South Wales to give birth.

The Australian Government's *Recovery Plan for the Grey Nurse Shark (Carcharias taurus)* lists mortality resulting from incidental (accidental and/or illegal) capture by commercial and recreational fishers as one of two principal threats and likely contributors to the lack of recovery of the grey nurse shark population.

Protection is afforded to this species under the current zoning plan by way of a Marine National Park (MNP) zone that has a radius of 1.2km from a central point at Wolf Rock, and a 300m wide Buffer zone around the MNP zone. The size of this MNP zone was based on research at the time that found grey nurse sharks made excursions of up to 1.2km away from aggregation sites. While the MNP zone prohibits all forms of fishing, the Buffer zone allows trolling for pelagic species to occur but excludes other forms of fishing. These zones were established to protect grey nurse sharks from injury, disease and mortality caused by interactions with commercial and recreational line fishing gear, and also protect the habitat that is critical to the survival of the population. The size of the combined MNP zone (4.5km^2) and Buffer zone (2.5km^2) around Wolf Rock is approximately 7km^2.

Contemporary research indicates that grey nurse sharks aggregating at Wolf Rock undertake excursions beyond the boundary of the existing MNP and Buffer zones, through areas of connected habitat, often in the direction of The Pinnacles and other rocky structure adjacent to Wolf Rock. Grey nurse sharks have been recorded at The Pinnacles and Round Rock, and around the base of Double Island Point. These sharks swallow fish whole and hence fishing hooks as well, instinctively targeting a fish that is retreating to deeper water after being hooked, resulting in sharks being hooked themselves. Therefore, trolling also poses a threat to grey nurse sharks when they are near the surface. Fishers may not be aware they have hooked a grey nurse shark and perceive a 'bite off'. If sharks survive the initial injury sustained from being hooked, a large portion of these swallowed hooks end up in the shark's stomach and migrate through the digestive tract creating internal injuries that can cause the death of the shark. Hook ingestion can also result in malnutrition and wasting away which subsequently affects the reproductive potential of females, with flow on effects to the viability of the Australian east coast grey nurse shark population. This contemporary research indicates that the size of the existing MNP and Buffer zones is insufficient to protect grey nurse sharks from the threat of fishing-related injury or mortality.

Grey nurse sharks at Wolf Rock attract SCUBA divers seeking to encounter this species in their natural habitat. A designated Grey Nurse Shark Area matches the boundary of the current combined MNP and Buffer zone (i.e. with a radius of 1.5km from the central point at Wolf Rock). The designated area adds to the protection of the grey nurse shark population with provisions to mitigate impacts of disturbance by divers on the natural behaviours of grey nurse sharks. The designated area also recognises the importance of the habitat to grey nurse sharks, over and above the MNP zone, and aims to mitigate habitat degradation. The designated area rules include restrictions on diving times, prohibited diver behaviours, a limit on the number of divers in a group allowed in the water at the same time, prohibited/allowed apparatus, and entry and use provisions for tourism program operators and dive clubs.

Preliminary results from a diver interaction study conducted at Wolf Rock indicate that grey nurse sharks aggregating at the site are not displaced from the Wolf Rock designated area as a result of the current frequency of diving and diver numbers. Therefore, the current designated area rules are effective to minimise disturbance to grey nurse sharks and the current level of diving at Wolf Rock is appropriate. However, given the size of the current designated area, the provisions relating to habitat and grey nurse shark disturbance do not apply to habitats now

known to be used by the sharks beyond the existing designated area.

Consultation feedback to date

Key feedback and suggestions to date:

- Mixed views on whether there should be increased protection for grey nurse sharks in the marine park.
- A small number of people suggested an increase in the size of the MNP zone around Wolf Rock to better protect grey nurse sharks from the impacts of fishing.
- Others suggest expanding the current Buffer zone around Wolf Rock to increase protection for grey nurse sharks while allowing fishers to troll for pelagic fish species.
- A small number of people have indicated that an expansion of the MNP zone around Wolf Rock is likely to impact commercial line fishers.
- Some support for restricting scuba diving at Wolf Rock to clients of marine park permit holders only.

The problem

Grey nurse sharks are undertaking excursions from, and utilising habitat adjacent and connected to, the existing Wolf Rock MNP and Buffer zones. When using these adjacent habitats outside of the Wolf Rock MNP and Buffer zones, grey nurse sharks are at risk from fishing-related mortality and injury. Without changes to the GSMP zoning plan that protect grey nurse sharks using areas of critical habitat connected to the gestation and aggregation site at Wolf Rock, population recovery and improvements in the viability of the Australian east coast population of grey nurse sharks will be constrained.

6.3.2.2 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements for the protection of grey nurse shark. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which the options 2 and 3 are assessed.

6.3.2.3 Option 2 – Expand the Buffer zone and maintain extent of the Marine National Park zone

Under this option, the existing 300m wide Buffer zone that encloses the MNP zone at Wolf Rock would be extended to incorporate areas of known grey nurse shark habitat including the base of Double Island Point and the Pinnacles. As is currently the case, the Buffer zone would complement the MNP zone established to protect grey nurse sharks and would have the same provisions as the MNP zone but allow trolling by recreational and commercial fishers for pelagic species.

The current designated Grey Nurse Shark Area would be enlarged to match the expanded Buffer zone in recognition of the importance of habitats at Round Rock and the Pinnacles to grey nurse sharks. In line with the SRG's guiding principles, this expansion in the size of the designated area would aid in protecting vulnerable life stages of grey nurse sharks by protecting this species from disturbance by divers and their critical habitat from degradation.

Potential benefits

- Improvement in the protection of grey nurse sharks in areas of known habitat, from injuries and mortality associated with fishing hook ingestion.
- A secondary benefit of enlarging the Buffer zone and protecting a larger area of grey nurse shark habitat would be improved representation of the following habitat types in a highly protected zone type:
    - high energy rocky headlands and platforms
    - subtidal rocky reef
    - deep holes and gutters (consolidated)
    - high energy subtidal sand or gravel
    - low energy subtidal mud, sand or gravel.
- Commercial fishers affected by the change in zoning would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the zoning plan review.

Potential costs

- Socio-economic impacts to commercial and recreational line fishers who are unable or unwilling to change to trolling as the means of catching fish in the area.
- The expanded Buffer zone would impact on some actively used commercial fishing grounds. The impacts of this change on affected commercial fishers may be significant enough to require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds

and potential effort transfer issues.
- Loss of access to some areas for recreational fishing other than trolling.
- Cost to government to enforce the provisions of the expanded Buffer zone in this location however this would be negligible given the size and location of the existing Buffer zone.

In summary, this option would provide some conservation benefit compared to the existing management arrangements, while allowing continued access for some commercial and recreational line fishing. However, injuries and mortalities from the ingestion of hooks on trolling lines would continue to affect a critically endangered species, compromising the ability to maximise population recovery and improvements in the viability of the east coast population of grey nurse sharks.

6.3.2.4 Option 3 – Expand the Marine National Park zone and remove the Buffer zone

This is the preferred option that is reflected in the draft zoning plan

This option would replace all of the current Buffer zone, approximately 0.5km^2 (24%) of the Conservation Park zone around Double Island Point and approximately 10.4km^2 (1%) of the General Use Zone that extends from Double Island Point to Sandy Cape with an additional 13.5km^2 of MNP zone that included the Pinnacles, Round Rock and the base of Double Island Point. This would bring the total area of the expanded MNP zone to 18km^2.

The current designated grey nurse shark area would be enlarged to match the expanded MNP Zone in recognition of the importance of habitats at Round Rock and the Pinnacles to grey nurse sharks. In line with the SRG's guiding principles, this expansion in the size of the designated area would aid in protecting vulnerable life stages of grey nurse sharks by protecting this species from disturbance by divers and their critical habitat from degradation.

Potential benefits

- Improvement in the spatial extent of protection of grey nurse sharks in areas of known habitat, from injuries and mortality associated with fishing hook ingestion.
- Addresses recommendations in the *Recovery Plan for the Grey Nurse Shark (Carcharias taurus).*
- The expanded MNP zone would likely result in an 'umbrella conservation effect' in that the measures used to protect grey nurse sharks would also extend to other species utilising the same habitat such as manta rays, turtles, eagle rays, leopard sharks, sea snakes and Queensland groper.
- A secondary benefit of protecting a larger area of grey nurse shark habitat would be improved representation and connectivity between the following habitat types in the MNP zone:
    - high energy rocky headlands and platforms
    - subtidal rocky reef
    - deep holes and gutters (consolidated)
    - high energy subtidal sand or gravel
    - low energy subtidal mud, sand or gravel.
- The expanded MNP zone would directly adjoin the Great Sandy National Park, providing ecosystem linkages across marine and terrestrial protected areas.
- Commercial fishers affected by the change in zoning would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the zoning plan review.

Potential costs

- Reduction in the area available for commercial fishing (of 13.5km^2) through the expansion of the MNP zone would be expected to impact some commercial trawl and line (e.g. Spanish mackerel) fishers. To minimise potential impacts on the trawl fishery, the boundary alignment of the south-eastern portion of the expanded MNP zone has taken into consideration the area where trawling is expected to occur. The impacts of this change on affected commercial fishers would be significant enough to require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- The expanded MNP zone would be expected to impact some recreational fishers as all fishing and collecting would be prohibited. To minimise potential impacts on rock fishers walking around the base of Double Island Point, the large and accessible rock platform at the northern tip of the Point would be excluded from the MNP zone.
- Cost to government to enforce the provisions of the expanded MNP zone in this location however this would be negligible given the size and location of the existing MNP zone.

- Cost to government (labour and operating) of approximately $5000 per annum to enforce the provisions of the expanded designated grey nurse shark area.

This option is expected to provide significant conservation benefits for grey nurse sharks by eliminating the risk of injuries and mortalities from hook-related interactions in the area of the only known gestation site for this species on the east coast. The enlarged MNP zone, which prohibits all forms of fishing, reflects recent scientific evidence on the spatial extent of grey nurse shark usage of this key habitat and its management, and will decisively address the fishing related risk. Implementation of this option would clearly achieve an objective of the zoning plan review – *to improve the protection and conservation of threatened species*, and the Australian Government's *Recovery Plan for the Grey Nurse Shark,* as well as the SRG's recommended guiding principle to ensure vulnerable life stages of species are effectively protected in no-take (i.e. MNP) zones.

Preferred approach to protect grey nurse sharks

Option 3 is the preferred approach as it provides a balanced and precautionary approach that integrates recent scientific evidence to improve protection of the critically endangered Australian east coast population of grey nurse sharks. It includes and protects areas of known habitat usage within an enlarged MNP zone that will eliminate the risk of injury and mortality from incidental capture by commercial and recreational fishers at this location.

Implementation of this option is expected to result in a net benefit to Queensland as it delivers substantive and threat-focused action at a site that is vital to the maintenance and recovery of a species that is in critical danger of extinction. The implementation of actions to protect species from extinction is enshrined in international biodiversity conventions and agreements, to which Australia is a signatory, and is fundamental to state and national nature conservation / environmental and marine park legislation. The implementation of this option also aligns with the SRG guiding principles for the zoning plan review in relation to the protection of vulnerable life stages and the protection of species of conservation concern. The benefits to the protection of this critically endangered species from this option are considered to outweigh the implementation costs to government and the localised costs on the community.

While option 2 would deliver some conservation benefit, these benefits would not be fully realised as grey nurse sharks would continue to be at risk of hook-related injuries and mortality as trolling for pelagic species would continue in the area.

Appendix 4 shows the location of the expanded MNP zone around Wolf Rock.

6.3.3 Marine turtles, dugong and dolphins

6.3.3.1 Issue

The Great Sandy Marine Park (GSMP) supports nationally and internationally important populations of threatened marine turtles, dugongs and dolphins. These species rely on areas of core habitat within the marine park during different stages of their lifecycle and for their survival. Addressing current and emerging threats to the viability of these populations requires specific management measures.

Protecting and connecting a range of habitats that are critical to the survival of these threatened species throughout the marine park including nesting, inter-nesting, foraging, resting, courtship and breeding areas ensures the availability of resources for species throughout their lifecycle. If habitats are lost permanently or regularly exposed to disturbance, the recovery of threatened species at a local level can be compromised. Protecting larger areas of habitat aids the resilience of these habitats to future disturbance and climate change impacts and supports populations of threatened species.

Threats posed by fisheries are recognised globally as one of the most pressing threatening processes to marine megafauna populations. Incidental catch in large mesh gillnets can impact threatened species at a local and regional scale, with flow on impacts that can also affect global populations. In trawl fisheries, there are concerns for the health of female turtles which are in active physiological processes of egg production in inter-nesting areas and are exposed to stress from being caught in a trawl net despite the use of turtle exclusion devices.

Vessel collision is also a major threat to air-breathing marine species, especially in shallow coastal waters and bays. Injuries inflicted from a propellor or from impact with a vessel's hull can result in severe injury or mortality. At low tide, dugong and turtles occupy the edges of sandbanks and their adjacent deep-water areas. This is also where vessels travel on the low tide, which results in an increased risk of vessel strikes to these animals. A

predicted 13% increase in the next 10 years in the size of the recreational boating fleet registered in the local government areas of the GSMP also increases the risk of vessel interactions with these threatened species.

Turtles

Six of the world's seven species of marine sea turtles utilise extensive areas across the GSMP. For example, the Woongarra Coast provides significant nesting and inter-nesting habitat, much of the Great Sandy Strait is key turtle foraging habitat, and Sandy Cape is an important courtship and breeding area that also supports a small nesting population of loggerhead and green turtles. The estuaries, creeks and rivers along the western coastline of Hervey Bay including Baffle Creek and the Elliott and Burrum Rivers are frequented by green and loggerhead turtles that move into estuarine areas to forage for food. An individual turtle will occupy many habitats within an estuary for foraging.

Some turtles arriving in the GSMP have undertaken migrations of up to 10,000km to reach their natal beaches and coastal foraging sites. Turtles have tight and long-term fidelity to foraging sites within the GSMP, often travelling through other suitable foraging areas to reach their 'home' foraging site in the park. This long-term fidelity to 'home' sites demonstrates the importance of protecting 'home' habitats as, if displaced, turtles are unlikely to move to new foraging areas. Seagrass meadows throughout the park support foraging turtles and recent research indicates that large areas of shallow and deep seagrass habitats important to turtles and dugong in Hervey Bay are not protected in Marine National Park (MNP) zones.

There is only one genetic stock of loggerhead turtles in the South Pacific Ocean with much of the nesting occurring on beaches of GSMP, especially along the Woongarra coastline. The beach at Mon Repos supports the largest number of nesting loggerhead turtles on the eastern Australian mainland and is one of the two largest rookeries for this species in the South Pacific Ocean. Successful breeding here is critical for the survival of this endangered marine turtle. The impact of disturbances to turtles, nests, hatchlings, and nesting sites can be detrimental to nesting and hatchling success and more broadly, to the sustainability of the global loggerhead turtle population. At Mon Repos, human activities and domestic animals can disturb and interfere with turtles, hatchlings and turtle researchers, and nesting sites can be impacted by extreme weather events exacerbated by climate change.

The nesting population of loggerhead turtles in the South Pacific Ocean declined from approximately 3500 females per year in the mid-1970s to approximately 500 by the year 2000, with the decline primarily attributed to mortality from by-catch in otter trawl fisheries of northern and eastern Australia. Given that the age at first breeding is 30 years, the number of adult turtles is still relatively low today because of the declining nesting population three decades ago. Recruitment into the adult female breeding population has declined by approximately 50% over the past two decades and ongoing studies conducted along the Woongarra Coast have shown an unexplained decline in the annual loggerhead nesting population over the three breeding seasons prior to 2020-2021.This decline highlights the need for management actions that reduce current and emerging threats throughout turtles' home ranges and key habitats.

Various pieces of marine park legislation have prescribed management arrangements at Mon Repos for the purposes of conserving the marine turtle rookery, supporting public appreciation, and regulating public access for more than 30 years. However, the current zoning at Mon Repos does not adequately recognise or reflect the international importance of this marine turtle rookery. The waters adjacent to Mon Repos Beach are currently in a Habitat Protection zone and as such are not listed as a Matter of State Environmental Significance (MSES) under the State Planning Policy as would be the case with Marine National Park (MNP) and Conservation Park (CP) zones. State and local government authorities are only required to recognise the zoning status of areas listed as MSES when considering planning and development activities. Therefore, areas of the Woongarra Coast, critical for loggerhead turtles, are at risk of inadequate consideration in planning and development assessment.

Throughout the marine park, all species of turtle are at risk of being struck by vessels and entangled in fishing nets and crab pots while feeding in shallower water, by vehicles while laying their eggs on beaches, disturbed by domestic animals and artificial light while nesting, and interactions with trawlers in their inter-nesting habitat. Public concern regarding the impacts that commercial fisheries, especially large mesh gill netting, has on turtles is high. Go Slow Areas for vessels and other designated areas for turtles are spatially distributed around the marine park, however recent telemetry data has demonstrated that turtles utilise habitat where there are currently insufficient or no marine park management arrangements to assist in the protection of turtles.

For example, recent telemetry data shows that turtles are using inter-nesting habitat beyond the extent of the current designated Turtle Protection Area just prior to coming ashore to lay their eggs at Mon Repos. The one nautical mile wide trawling exclusion area was introduced in 2006 to address a turtle bycatch issue with the banana prawn trawl fishery. While Turtle Exclusion Devices (TED) and associated by-catch reduction devices are

compulsory in Queensland's east coast trawl fishery, disturbance and stress to turtles still occurs from interactions with trawl nets. This stress can result from turtles trying to actively 'outswim' the trawl net before tiring and struggling while endeavouring to escape via the TED opening.

Dugong

Dugongs are a species of high international biodiversity value, with Australian waters supporting most of the world's dugong population. As a signatory to the Bonn Convention and the associated Dugong Memorandum of Understanding, Australia has international obligations to conserve and manage dugongs and their habitats throughout their range in Australia. Great Sandy Marine Park is approaching the southernmost limit of dugong distribution along the east coast of Australia. Therefore management of threats in the marine park is important in conserving this species. Dugongs are slow breeders, maturing between 10–17 years of age with females reproducing every 3-7 years. This means dugongs are very susceptible to factors that threaten their survival including habitat loss, disturbance, injuries or mortality from vessel collisions and interactions with fishing gear.

The marine park's dugong population in 2016 was estimated at 2055 (±382). The mouth of the Burrum River, Great Sandy Strait, areas within Hervey Bay, and between Rooney Point and Sandy Cape at the northern end of K'gari (Fraser Island) support the largest numbers and are of particular importance to dugong. Contemporary research shows dugongs make repeated return winter migrations across Hervey Bay to the warmer waters around Sandy Cape.

Dugongs are frequently found associated with seagrass beds and can consume up to 36kg of seagrass each day. Dugongs and their feeding trails have been observed in seagrass beds across the marine park including within the Burrum River estuary and within Baffle Creek. Reductions in the availability of seagrass because of flooding from extreme weather events has been identified as a key factor in the fluctuation of dugong population numbers in the park as dugongs may delay breeding if there is a loss of food availability. Therefore, zoning arrangements that protect seagrass habitat assist in ensuring resilience of dugong foraging areas which are important for the long-term survival of this species.

Dugongs, like turtles, are also at risk of vessel strike and incidental catch or entanglement in commercial fishing nets. Public concern of the impacts that commercial large mesh netting has on this species is high, as once trapped within a net, the risk of the interaction ending in mortality is high, even with the use of net-attendance provisions under fisheries legislation. Vessel Go Slow Areas are spatially distributed around the marine park, however telemetry data has demonstrated that dugongs utilise shallow-water habitat where Go Slow Areas are not in place or are inadequate in size to assist in the protection of dugongs from vessel strike. The seasonal Go Slow Area at the northern end of K'gari (Fraser Island) does not provide adequate protection for dugongs or turtles from vessel strike as these threatened species utilise habitat in this area throughout most of the year. Based on the 2016 population estimate, as few as nine human-induced dugong deaths per year (e.g. from bycatch in large mesh gillnets and vessel strikes) can affect the long-term viability of the population. The significance of this number will be affected by other factors contributing to dugong mortality in any given year such as flood-induced seagrass loss, with climate change predicted to increase the frequency of these events.

Australian humpback dolphins

Australian humpback dolphins are one of the resident dolphin populations in the marine park and are listed as vulnerable under Queensland's *Nature Conservation Act 1992*. Humpback dolphins are included on the IUCN Red List with their current population trend noted as 'decreasing' due to their occurrence in small, discrete populations. There is a substantial lack of data on this species at a national scale, hence why it is not currently listed as a threatened species under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

Humpback dolphins mostly inhabit shallow coastal waters less than 15m deep, and are often associated with estuary mouths, mangroves and tidal channels. This species also uses habitats in proximity to rocky reefs, intertidal beaches and sandbanks. Fish and cephalopods such as bream, whiting, mullet, crabs, squid and octopus are known prey of humpback dolphins and are also target species of commercial fisheries. Primary feeding habitat for humpback dolphins in the northern Great Sandy Strait population is the Mary River estuary where feeding with the outgoing tide occurs daily. High fishing effort from commercial inshore large mesh gillnets and trawlers can impact on the availability of humpback dolphins' food sources where commercial fishing areas and dolphin foraging areas overlap.

The Great Sandy Strait contains two small geographically isolated communities of Australian humpback dolphins separated by the shallow area in the centre of the Strait near Sheridan Flats. Surveys conducted between 2004 and 2007 estimated each community had approximately 75 individuals and that there was little, if any, interaction occurring between the two populations. These populations show long-term and strong site fidelity to areas of the

Strait. Recent research indicates the possibility of a third discrete population of approximately 20 dolphins that range between Baffle Creek and the Great Sandy Strait utilising mouths of estuaries and creeks for core foraging habitat.

Small, isolated dolphin populations such as these, with low reproductive rates, are vulnerable to extinction and humpback dolphins are vulnerable to a range of environmental and anthropogenic threats. These include bycatch in commercial large mesh gillnets especially those set in creeks, rivers and shallow estuaries; incidental catch in shark control equipment; vessel strike; habitat loss and degradation; underwater noise; and poor water quality. The human-induced death of as few as 1 or 2 humpback dolphins per year in the Great Sandy Strait communities can affect the viability of these populations.

Consultation feedback to date

Key feedback and suggestions to date:

- A large number of people and organisations have expressed concern about the impacts of large mesh commercial gill nets on threatened species.
- Many people indicated that current MNP zones, CP zones and Go Slow Areas are inadequate to protect turtles and dugong based on current species distribution data and that there should be more Go Slow Areas in the marine park to protect turtles and dugong.
- Some people requested an increase in the size of the seasonal Go Slow Area at the northern end of K'gari (Fraser Island) stating that it is currently inadequate to protect nesting turtles while others sought the removal of this Go Slow Area stating it is a potential safety issue for small boats returning from offshore in adverse weather conditions.
- A small number of people indicated that Go Slow Areas affect commercial fishing operations and suggested that these areas should not apply to commercial fishers operating under an agreed Code of Practice.
- A number of people support changes to the designated area rules to improve protection for turtles at Mon Repos while a small group support the establishment of a MNP zone at Mon Repos.
- There was some support for introducing restrictions to prevent domestic animals and vehicles from accessing the beach between Littabella Creek and Baffle Creek to protect nesting turtles.
- The introduction of beach access restrictions and a Go Slow Area for vessels to protect nesting turtles on Moore Park Beach, similar to Mon Repos, was proposed in a small number of submissions.
- A change in zoning to prohibit trawling in the vicinity of Moore Park Beach to protect nesting turtles and hatchlings was also suggested.

The problem

The existing zoning plan arrangements do not adequately provide protection of marine turtles, dugong and Australian humpback dolphins or the range of habitats they use throughout their lifecycle, from current and emerging threats. Without changes to the current management arrangements, the role of the marine park in helping to conserve these populations is compromised. Options for different management arrangements seek to address the following problems:

- the ongoing risk and potential for threatened species to have adverse interactions with fishing gear due to continued use of commercial large mesh nets (gill and ring nets) in highly protected zones of the park (see 6.3.3.2) - mitigating the risk to threatened species from this form of fishing is crucial as post-release survivorship of turtles, for example, following interactions with fishing gear remains largely unknown
- inadequate protection of core habitat areas for threatened species from disturbance in highly protected zones (see 6.3.3.3)
- protection of inter-nesting turtles from stress as a result of interactions with trawl nets (see 6.3.3.4)
- ongoing threats to turtles and dugong of injury or mortality from vessel strike due to insufficient areas of key shallow water habitats included in designated Go Slow Areas (see 6.3.3.5)
- risks to turtles, nests and hatchlings from human activities and domestic animals at Mon Repos (see 6.3.3.6).

In summary, as these species are long-lived and, for example, turtles have a highly dispersed life history, they can be impacted by multiple threats that act simultaneously, at the same location, and continue across their entire life cycle. To achieve recovery of these threatened species, cumulative threats that could lead to a reduction in reproduction and jeopardise populations need to be managed and mitigated.

6.3.3.2 Mitigate risk of entanglement in commercial fishing nets

Some forms of commercial net fishing (e.g. netting with large mesh gillnets and ring nets) pose a significant risk to threatened species from entanglement. Interactions with commercial fishing nets can occur in threatened species'

foraging areas, in inter-nesting habitat (turtles), and along regularly travelled and migration routes. Both adults and juveniles are susceptible to incidental catch in these nets and little is known about an animal's survival, if it is released alive following a net interaction. By definition, threatened species are those that are at risk of extinction, therefore the injury or mortality of an individual of a threatened species as a result of a fishing net interaction potentially poses a threat to the sustainability of the local (and for some species, global) population of that species.

In 2021, the Department of Agriculture and Fisheries (DAF) conducted an ecological risk assessment (ERA) of the large mesh net component of the of East Coast Inshore Fin Fish Fishery (ECIF Large Mesh SOCC Level 2 ERA) in relation to Species of Conservation Concern (e.g. marine turtles, dugongs, dolphins, sharks and rays). This fishery is one of the most widespread commercial fisheries conducted within the GSMP. Biological and life-history constraints were determined to be either a key driver or the main contributor of risk. The ERA included consideration of existing management interventions that have been specifically applied to reduce the risk from these nets large mesh nets to some of these species, such as those required within a Dugong Protection Area. The ERA concluded that large mesh gill netting presents a high risk due to drowning for air breathing species that interact with nets, the under-reporting of interactions with non-target species is a concern, there is no method of monitoring fishing interactions, and identification of species is inadequate. Species of Conservation Concern identified in the ERA at high risk include green, loggerhead and hawksbill turtles, dugong, and the Australian humpback dolphin (amongst other species). The resident flatback turtle has been rated at medium risk, and visiting leatherback and olive ridley turtles at precautionary medium risk of interaction with large mesh nets in this fishery.

Marine park management provides a primary mechanism for the delivery of on-ground actions to protect threatened marine species from risks that may impact on their recovery. Commercial fishing nets, in particular large mesh gillnets and ring nets, have been identified as presenting a high risk of entanglement and mortality to a range of the threatened species that inhabit the marine park and therefore effective management actions need to be implemented to minimise the risk of injury, stress and mortality to these animals.

6.3.3.2.1 Option 1 – No change to zoning plan – Continued monitoring of net fishing activities and improving knowledge of risk

This option would maintain the existing zoning plan arrangements. There would be no changes made to the current zoning plan to remove or reduce the risk of entanglement of threatened species in commercial fishing nets which would not address the problem identified.

Currently, the Department of Environment and Science (the department) monitors and contributes technical advice to the implementation of recommendations detailed in the East Coast Inshore Large Mesh Net Fishery Level 2 ERA for Species of Conservation Concern (DAF 2021) and resultant fisheries management reforms by DAF. The department collaborates with DAF and seeks to improve conservation outcomes for threatened species that have been identified as being at risk of interactions with large mesh nets (gillnets and ring nets) in this fishery, with outcomes delivered through DAF's fisheries management.

This option is the base case against which the other options are assessed.

6.3.3.2.2 Option 2 – Remove all commercial netting from Great Sandy Area waterways

This option would prohibit all forms of commercial net fishing (including bait netting) from the Conservation Park zones within waterways of the current designated Great Sandy Area – Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, which all provide important habitat for a range of threatened species. This option would eliminate the risk of threatened species' interactions with fishing nets that can result in injury or mortality.

This option would be integrated with a potential solution to address conflict between the fishing sectors within these waterways (see section 6.2.3). It would create a major cost to commercial fishers and reduce seafood supply to the public (either directly from seafood retailers or via the hospitality sector). It would require substantial cost to government for an impact mitigation package for affected commercial fishers and post-harvest sector businesses.

For full discussion of this option and potential benefits and costs see section 6.2.3.

6.3.3.2.3 Option 3 – Remove some commercial netting from Great Sandy Area waterways

This option would prohibit the use of large mesh nets (gill nets and ring nets) operating under N1 and N2 fishery symbols, in the Conservation Park zones within waterways of the current designated Great Sandy Area – Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet as these pose the highest risk to

threatened species. Each of these waterways provide important habitat for a range of threatened species. The use of commercial net fishing apparatus that present less of a risk to threatened species, such as bait (small mesh nets), tunnel and set pocket nets, would be allowed to continue in these waterways. The injury or mortality risk to threatened species from interactions with fishing nets would be significantly reduced but not totally removed.

This option would be integrated with a potential solution to address conflict between the fishing sectors within these waterways (see section 6.2). It would create a major cost to commercial fishers and reduce seafood supply to the public (either directly from seafood retailers or via the hospitality sector). It would require substantial cost to government for an impact mitigation package for affected commercial fishers and post-harvest sector businesses.

For full discussion of this option and potential benefits and costs see section 6.2.4.

6.3.3.2.4 Option 4 – Combination of part of option 1 and option 3

This is the preferred option that is reflected in the draft zoning plan

Option 4 includes both:

- continuing to monitor, contribute to and support the implementation of DAFs threatened species monitoring and risk mitigation initiatives for large mesh gill nets identified in the ERA (Option 1); and
- removal of large mesh gill nets and ring nets from waterways in the current designated Great Sandy Area - Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet as detailed under Option 3.

This combined option recognises and continues to support DAF's fishery wide program to enhance monitoring of net fishing activities, refine understanding of the of risks that net fisheries present to threatened species and to implement risk reduction initiatives through fisheries management. It also leverages the solution to the conflict in the waterways of the designated Great Sandy Area, to significantly reduce entanglement risks to threatened species from large mesh gill nets and ring nets within key threatened species habitats within the marine park (i.e. Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet).

The potential benefits and costs of monitoring net fishing activities and improving knowledge of risks to threatened species are presented below. The potential benefits and costs of the removal of large mesh gill nets are identified in 6.2.4

Potential benefits

- Recognises that threatened species utilise or traverse most areas of the marine park, not just the four waterways that are proposed for specific marine park management intervention under this combined option, and therefore this option will reduce entanglement risks over time throughout the entire marine park through:
    - improved knowledge of fine scale movement of fishing effort in critical habitats for threatened species
    - identification of ways to monitor non-target species catch (incorporating threatened species minimising the risk of non-compliance with reporting requirements for SOCI
    - implementation of actions under fisheries legislation to reduce risks.
- Recognises that many of the threatened species that utilise the habitats within the marine park also migrate to areas outside the boundary of the park where they can become susceptible to entanglement with fishing nets. Improved management of fishing net entanglement risks over time at a fishery wide (i.e. whole of east coast) scale through the DAF processes, will also assist in protecting the marine parks threatened species populations when they leave the boundaries or the park.

Potential costs

- Nil.

The implementation of recommendations under the ERA would improve knowledge, monitoring and reporting of interactions between the net fishery and threatened species, and the large mesh nets that present the greatest risk to threatened species would be removed from these waterways. There would be significant costs incurred in implementing this option (from the option 3 component) which would require an impact mitigation package to assist affected commercial fishers and post-harvest sector businesses.

<u>Preferred approach</u> to mitigate the risk of entanglement in commercial fishing nets

Option 4, which combines part of Option 1 (continued monitoring of the mitigation of risks to threatened species under DAF's ERA) and Option 3 is the preferred approach, as it would provide the most effective management response to reducing the risk to threatened species from entanglement in large mesh nets used by commercial fishers throughout the marine park.

While Option 1 is expected to deliver improved management of these entanglement risks through implementation of the ERA recommendations and ultimately adjustments to DAFs fisheries management, the whole of fishery scale that this work is being conducted will mean that location specific risk reduction actions may take considerable time to deliver. By combining Option 1 with the prohibition of nets from some of the key threatened species' habitats within the marine park, an immediate risk reduction for threatened species will be delivered, which will then be complemented over time with complementary fishery wide impact reduction initiatives. This option integrates well with the preferred solution for addressing the fishing related conflict within designated Great Sandy Area (discussed in section 6.2), whereby the prohibition of large mesh gill nets and ring nets from the Conservation Park zones within the Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet will deliver both, a solution to the conflict in these waterways and a significant reduction in the entanglement risk to the threatened species that inhabits these waterways. Commercial fishers and post-harvest sector businesses affected by changes would be eligible to apply for assistance from a commercial fishery impact mitigation package.

6.3.3.3 Improve protection of turtle and dugong core habitat

Turtles and dugong utilise a range of different habitats in GSMP during their various life stages. Ensuring these core habitats are protected, connected, and resilient is important to sustain populations of these threatened (and other) species and improve their chances of recovery. Degradation of core habitats can result in short and long-term impacts on individuals and populations. Floods and storms, climate change, coastal development, and fisheries activities including trawling which modify benthic habitats such as seagrass can contribute individually and cumulatively to habitat degradation. If the integrity of core habitats is compromised, individuals and populations can be physically displaced, behaviours may alter, reduction in breeding success and increases in mortality can be expected to constrain population recovery.

While the current zoning plan has management arrangements in place that recognise some of the habitat requirements of turtles and dugong, a range of changes would ensure more core habitats are protected, connected and resilient.

6.3.3.3.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2, 3, 4 and 5 are assessed.

6.3.3.3.2 Option 2 – Upgrade the zoning at Mon Repos to Marine National Park Zone

This option would change the zoning at the internationally significant turtle nesting area of Mon Repos from Habitat Protection (HP) to a Marine National Park (MNP) zone, to ensure the appropriate recognition and protection of habitat essential to the population of endangered loggerhead turtles, as well as vulnerable green and flatback turtles. The MNP zone would be approximately 3km^2 and extend along the coast from Mon Repos to Burnett Heads and extend 500m offshore. Oaks Beach, which is a significant nesting beach supporting the second highest number of loggerhead turtle nests along the Woongarra Coast, would be incorporated in the MNP zone. A MNP zone in this location, unlike the existing HP zone, would be a Matter of State Environmental Significance (MSES) under the State Planning Policy and the *Environmental Offsets Act 2014.* The MNP zone would prohibit all forms of recreational and commercial fishing.

Potential benefits

- As a MSES, the area covered by the MNP zone would be considered in state and local planning schemes and during development assessment processes, ensure protection of core nesting and inter-nesting habitat for turtles, from inappropriate land uses and development.
- Risk of incidental capture of turtles in commercial fishing nets and pots would be eliminated, although the benefit associated with this would be small given the low level of net fishing and crabbing in this area.
- Commercial fishers affected by the change in zoning would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the zoning plan review.

- Improved connectivity across terrestrial and marine protected areas as the MNP zone would directly adjoin the Mon Repos Conservation Park, noting that turtles nest above and below the level of highest astronomical tide and hence utilise habitat in both the Mon Repos Conservation Park and the marine park.
- A secondary benefit of upgrading the zoning would be improved representation and connectivity between the following habitat types in the MNP zone:
    - low energy sandy beaches and bars
    - boulder dominated rocky shores
    - intertidal corals
    - subtidal corals
    - low energy subtidal mud, sand or gravel.
- Expansion of the MNP zone protects areas adjacent to inshore fringing coral reef and rocky basalt foreshore habitat, including intertidal and subtidal corals habitat types along the Woongarra coastline of Hervey Bay.

Potential costs

- All commercial fishing that can currently occur within the HP zone (netting, line fishing, crabbing) would be prohibited in the MNP zone resulting in a loss of income to commercial fishers who fish within 500m of the shore. The scale of this loss would be expected to be small as low levels of catch are reported in the fishery reporting grid sites that encompass this area. The impacts of this change on affected commercial fishers could require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- The MNP zone would be expected to impact shore and vessel-based recreational fishers. Impacts would be expected to affect local residents and visitors to the Turtle Sands Caravan Park.
- Cost to government ($1500 per annum) to enforce no land-based line fishing along the shore and nearshore vessel-based fishing.

In summary, although this option would afford MSES status to habitat that is critical for endangered loggerhead turtles and other vulnerable turtle species, the impacts on recreational and commercial fishers, especially shore based recreational fishers would be unnecessary. The costs of this option on community and government outweigh the benefits.

6.3.3.3.3 Option 3 – Upgrade the zoning at Mon Repos to Conservation Park Zone

This option would change the zoning at the internationally significant turtle nesting area of Mon Repos from Habitat Protection (HP) to a Conservation Park (CP) zone, to ensure the appropriate recognition and protection of habitat essential to the population of endangered loggerhead turtles, as well as vulnerable green and flatback turtles. The CP zone would be approximately 3km^2 and extend along the coast from Mon Repos to Burnett Heads and extend 500m offshore. Oaks Beach, which is a significant nesting beach supporting the second highest number of loggerhead turtle nests along the Woongarra Coast, would be incorporated in the CP zone. A CP zone in this location, unlike the existing HP zone, would be a Matter of State Environmental Significance (MSES) under the State Planning Policy and the *Environmental Offsets Act 2014.*

The CP zone would prohibit commercial net (except bait netting) and crab fishing, and restrict recreational and commercial line fishers to two rods/hand-held lines and two hooks per person.

Potential benefits

- As a MSES, the area covered by the CP zone would be considered in state and local planning schemes and during development assessment processes, ensure protection of core nesting and inter-nesting habitat for turtles, from inappropriate land uses and development.
- Risk of incidental capture of turtles in commercial fishing nets and pots would be eliminated, although the benefit associated with this would be small given the low level of net fishing and crabbing in this area.
- Commercial fishers affected by the change in zoning would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the zoning plan review.
- Improved connectivity across terrestrial and marine protected areas as the CP zone would directly adjoin the Mon Repos Conservation Park, noting that turtles nest above and below the level of highest astronomical tide and hence utilise habitat in both the Mon Repos Conservation Park and the marine park.
- A secondary benefit of upgrading the zoning would be improved representation and connectivity between the following habitat types in the CP zone (a highly protected zone type):
    - low energy sandy beaches and bars

- boulder dominated rocky shores
- intertidal corals
- subtidal corals
- low energy subtidal mud, sand or gravel.

- The CP zone protects areas adjacent to inshore fringing coral reef and rocky basalt foreshore habitat, including intertidal and subtidal corals habitat types along the Woongarra coastline of Hervey Bay.

Potential costs

- Most commercial fishing that can currently occur within the HP zone (netting, line fishing, crabbing) would be prohibited or restricted in the CP zone resulting in a loss of income to commercial fishers who fish within 500m of the shore. The scale of this loss would be expected to be small as low levels of catch are reported in the fishery reporting grid sites that encompass this area. The impacts of this change on affected commercial fishers could require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- The CP zone would be expected to have minor impact on shore and vessel-based recreational fishers as the maximum number of rods/hand-held lines and hooks used per person would be reduced from three lines/six hooks to two lines/two hooks.
- Cost to government ($750 per annum) to enforce restricted land-based line fishing along the shore and nearshore vessel-based fishing.

In summary, this option would afford MSES status to habitat that is critical for endangered loggerhead turtles and other vulnerable turtle species, while minimising the impacts on recreational and commercial fishers, especially shore based recreational fishers. Shore-based fishing that is currently allowed between 6am and 6pm within the designated Mon Repos Area during the turtle nesting season would continue. This option provides a net benefit to Queensland as the conservation benefits to core habitat of threatened species outweigh the minor costs on community and government.

6.3.3.3.4 Option 4 – Expand the size of two existing Marine National Park zones

This option would expand the size of the existing MNP04 (Woodgate) and MNP10 (Fork Bank) in western Hervey Bay to protect shallow and deep subtidal seagrass habitat which provides important feeding habitat for turtles and dugong and habitat where these species are also known to rest and transit through. Hervey Bay has the most extensive seagrass habitat within GSMP and contains all of the deep subtidal seagrass mapped in the marine park, however none of this vulnerable habitat which is also critical for turtles and dugong is currently represented (and hence protected) in the existing MNP zone network. Inclusion of this habitat type in these large, expanded MNP zones would ensure 16% of the marine park's deep subtidal seagrass is protected from human induced disturbance. The expanded MNP zones in this location would improve connectivity between shallow and deep subtidal seagrass habitats, and across MNP zones important for threatened and other species foraging and resting in these habitats, and transiting across Hervey Bay.

The existing MNP04 would expand from 44km^2 to 211km^2 and the existing MNP10 would expand from 68km^2 to 167km^2. Both extensions would convert existing General Use (GU) zone to MNP zone.

Potential benefits

- The expanded MNP zones which incorporate and protect larger areas of seagrass habitat is expected to aid resilience of these habitats to disturbance events, e.g. floods and climate change impacts, and assists the long-term survival and health of seagrass to support populations of threatened species during such events.
- The expanded MNP zones aid and improve connectivity of core habitats utilised by threatened species across the marine park.
- Seagrass provides an important nursery habitat for many commercially and recreationally caught fish and crustaceans. Protecting this habitat in the expanded MNP zones is expected to result in "spillover" of these species into areas where fishing can occur.
- Commercial fishers affected by the change in zoning would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the zoning plan review.

Potential costs

- All commercial fishing that can currently occur within the GU zone (trawling, netting, line fishing, crabbing) would be prohibited in the expanded MNP zones resulting in a loss of income to commercial fishers who currently fish in this area. Each of these fisheries, except the pot fishery, report relatively low levels of catch in the fisheries reporting grids that encompass the expanded MNP zones (refer to Figures 10-12 in section

7). The pot fishery reports moderate levels of catch in these areas and therefore may be more significantly impacted. The impacts of these changes on affected commercial fishers would likely require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- The expanded MNP zones would be expected to impact recreational fishers, although some known fishing sites have been avoided in determining the boundaries of these zones.
- Cost to government to enforce the provisions of the expanded MNP zone in these locations would be negligible given the size and location of the existing MNP zones.

In summary, the expansion of two MNP zones, under this option would protect large areas of core habitat utilised by turtles and dugong and promote resilience to threats associated with climate change. Other species would also benefit from the protection of seagrass habitat with flow on effects for commercial and recreational fisheries.

In accordance with the SRG Guiding Principles for the zoning plan review, the alignment of the boundaries of these proposed MNP zones has considered, and attempted to minimise impacts on, existing uses in the area including, key fishing grounds and aquaculture areas.

6.3.3.3.5 Option 5 – Combination of options 3 and 4

This is the preferred option that is reflected in the draft zoning plan

This option would implement both options 3 and 4 in combination by:
- upgrading the HP zone at the internationally significant turtle nesting beach and inter-nesting area at Mon Repos to a CP zone and expanding north to Burnett Heads
- expanding two MNP zones in western Hervey Bay to include more areas of shallow and deep subtidal seagrass important to foraging, resting and transiting turtles and dugong.

For discussion of these options, and potential costs and benefits see 6.3.3.3.3 and 6.3.3.3.4.

The combination of CP zone at Mon Repos and expanded MNP zones in western Hervey Bay recognises the diversity of habitat types, spatial extent and connectivity of habitat usage across the marine park for turtles and dugong and the various life stages of these species (especially turtles). Impacts on commercial and recreational fishing have been minimised in developing this option. With expected direct impost on commercial and recreational fishers likely to be reasonably low, the benefits of this option outweigh the costs to government and the community and therefore provides a net benefit to Queensland.

Preferred approach to improve protection of turtle and dugong core habitat

Option 5 is the preferred approach as it is expected to enhance recognition and protection of habitats critical for threatened species, improve connectivity of core habitats across the marine park, and aid habitat resilience from future disturbances, more effectively than options 2, 3 or 4 could achieve alone. This option meets the objective of the zoning plan review – *to improve the protection and conservation of threatened species*, and the SRG guiding principle of including species, populations and areas of special interest in no-take (i.e. MNP) zones. The implementation of actions to support species that are that are under threat of extinction is enshrined in international biodiversity conventions and agreements to which Australia is a signatory and is fundamental to state and national nature conservation / environmental and marine park legislation. Option 5 would incorporate changes that improve protection and conservation of nesting and inter-nesting turtles, turtle hatchlings and habitat, dugong and turtle foraging habitat, and resting and transiting areas, while minimising impact to commercial and recreational fishing.

Given the significant conservation benefits of this option, particularly to supporting threatened species, and the expected low-moderate direct impost on commercial and recreational fishers from its implementation, it is considered that the benefits of this option outweigh the costs to government and the community and would therefore provide a net benefit to Queensland.

Appendix 4 shows the location of the CP zone between Mon Repos and Burnett Heads and the expanded MNP zones in western Hervey Bay.

6.3.3.4 Improve protection of inter-nesting turtles

Current research indicates turtles use extensive areas off the internationally significant Mon Repos beach during their inter-nesting period between laying clutches of eggs on the beaches of the Woongarra Coast. These inter-nesting habitats are vitally important to nesting turtles undertaking the physiological process of egg production and when preparing to come ashore to lay. When using inter-nesting areas, turtles are at risk of interactions with commercial trawlers. Turtle excluder devices (TEDs) are in place to enable turtles to escape trawl nets, however, the process of trying to "outswim" or escape from nets through the TEDs places turtles under stress, which may be having detrimental impacts on their egg production and nesting success.

6.3.3.4.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements in relation to the extent of the designated Turtle Protection Area. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.3.3.4.2 Option 2 – Replace the Turtle Protection Area with a Habitat Protection Zone and extend

This option would replace the current designated Turtle Protection Area (that extends approximately 1.8km offshore) with a Habitat Protection zone that extends to approximately 5km offshore. The HP zone would incorporate a larger proportion of known turtle inter-nesting habitat than the Turtle Protection Area and would prohibit trawling at all times to eliminate the risk of stress and detrimental impacts to turtles at a critical life stage.

Potential benefits

- As the HP zone would prohibit trawling at all times, turtles utilising the area for inter-nesting habitat at any time would be protected from interactions with trawlers. This is expected to improve turtle nesting success from a reduction in stress caused by interactions with trawl nets and having to escape nets via TEDs.

Potential costs

- Trawling that can currently occur in the area (other than during the seasonal closure imposed by the Turtle Protection Area) would be prohibited at all times of the year, affecting the income of these fishers. The scale of this loss would be expected to be small as low levels of catch are reported in the fishery reporting grid sites that encompass this area. The impacts of this change on affected commercial fishers could require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.

In summary, this option would significantly reduce the risk of turtle interactions with trawl nets at peak nesting time and at all times of the year by expanding the area within which trawling is prohibited. Turtles nesting earlier or later due to climate change would automatically be protected from the risk of interactions with trawlers. While the conservation benefits expected under this option include improved nesting success with flow on benefits to turtle populations both regionally and internationally, the year round impost on trawling is unnecessary.

6.3.3.4.3 Option 3 – Expand the existing designated Turtle Protection Area off Mon Repos

This is the preferred option that is reflected in the draft zoning plan

This option would extend the boundary of the current designated Turtle Protection Area off Mon Repos from approximately 1.8km to approximately 5km offshore (see Appendix 6). This change would prohibit trawling from a larger area of turtle inter-nesting habitat between 1 November to 31 January thereby protecting these turtles from stress inducing interaction with trawl nets and TEDs during the critical egg production stage of their life cycle.

Potential benefits

- Research at Mon Repos shows an unexplained decline in recruitment of endangered loggerhead turtles into the nesting cohort. This option is expected to reduce stress on turtles inter-nesting in the area and improve nesting success.
- Commercial fishers affected by the change would be eligible to apply for financial mitigation as part of the commercial fisheries impact mitigation package to be implemented as part of the zoning plan review.

Potential costs

- Trawling that can currently occur in the area of the proposed expansion would be prohibited between 1 November and 31 January, affecting the income of these fishers. The scale of this loss would be expected to be small as low levels of catch are reported in the fishery reporting grid sites that encompass this area

during this time. The impacts of this change on affected commercial fishers could require mitigation through an impact mitigation package, that would be expected to address the loss of access to these fishing grounds and potential effort transfer issues.
- Negligible cost to government to enforce the seasonal no trawling provisions over the larger area.

In summary, this option would prohibit trawling for the same time period as currently exists but over an area about twice the size. When coupled with trawl closure periods imposed under fisheries legislation, this option maximises the protection for inter-nesting turtles while minimising impost on the trawl fishery. The conservation benefits expected under this option include improved nesting success with flow on effects to turtle populations both regionally and internationally. The expected benefits outweigh the costs to fishing businesses and government and is therefore expected to provide a net benefit to Queensland.

Preferred approach for improving protection of inter-nesting turtles

Option 3 is the preferred approach as the implementation of a HP zone offshore of Mon Repos under Option 2 prohibits trawling year-round when turtles and hatchlings have departed the area and few interactions between turtles and trawl nets would be expected to occur. Option 3 minimises the risk of turtle-trawl net interactions in known inter-nesting habitat during the peak nesting season (November to January) when turtles are at highest risk of stress affecting egg preparation. Commercial trawling would be allowed at other times of year when turtles are not using these inter-nesting habitats. Fisheries data suggests minimal trawling is undertaken in these habitats, therefore impacts on the industry from the extended spatial extent of the designated Turtle Protection Area are expected to be minor. Despite the low fishing activity, Option 3 would be expected to improve turtle nesting success due to the reduction in stress associated with any net interactions. Option 2 would also meet the objective of the zoning plan review – *to improve the protection and conservation of threatened species* but would incur higher and unnecessary costs to commercial trawl fishers and government than Option 3.

6.3.3.5 Reduce the threat to turtles, dugong, and dolphins from vessel strike

Contemporary research indicates turtles, dugong and Australian humpback dolphins regularly use areas that extend beyond the existing designated Go Slow Areas which puts these air-breathing species at risk of vessel strike especially in critical feeding, resting and basking areas. For example, dugongs require a minimum water depth of approximately two metres to be able to dive deep enough to avoid vessel strike. The detrimental impacts of vessel strike on these threatened species include disease, injury and mortality and reducing the speed of vessels in known high-use areas significantly decreases the risk of collisions.

Go Slow Areas in the marine park are located in shallow waters (generally less than 2m depth). Fishing is not prohibited from these areas (subject to the underlying zone provisions) and vessels are required to travel off the plane. Go Slow Area provisions do not apply in marked navigation channels and several transit lanes allow vessels to traverse Go Slow Areas on the plane.

One of the designated Go Slow Areas extends along the Woongarra Coast between Burnett Heads and Elliott Heads. Surf life-saving patrols in this area are undertaken by Queensland Surf Life Saving volunteers from three surf life-saving clubs located at Bundaberg, Elliott Heads and Moore Park. Volunteers patrol the area immediately in front of each surf club and also undertake patrols of other beaches along the Woongarra Coast using personal watercraft and rigid inflatable boats. These patrols often require the vessels to travel at speed, and hence on the plane, between locations which contravenes the special management provisions for the Go Slow Area. Patrols and boat handling training often requires the vessels to be operated in a manner that would also be considered a motorised water sport. A management arrangement is required that authorises legitimate surf life-saving training activities and patrols to occur within the designated area.

6.3.3.5.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements in relation to the location of Go Slow Areas and their management provisions. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which Option 2 is assessed.

6.3.3.5.2 Option 2 – Establish and amend designated Go Slow Areas and rules

This is the preferred option that is reflected in the draft zoning plan

This option would include the following changes to improve conservation and protection of air-breathing species including turtle, dugong and inshore dolphins from the risk of vessel strike in areas identified as important habitats within and beyond the existing Go Slow Area network, and authorise legitimate surf life-saving activities:

- Adjust the boundary and/or increase the size of eight existing Go Slow Areas.
- Establish a new Go Slow Area in the vicinity of the Reef Islands within the Great Sandy Strait.
- Amend the rules in the Sandy Cape Go Slow Area to apply year-round rather than on the current seasonal basis.
- Prohibit motorised water sports (see Appendix 9 for definition) in all existing and Go Slow Areas in place to protect turtles and dugong and stipulate a maximum vessel speed of 6 knots.
- Introduce a special management provision that exempts (with permission) persons conducting authorised surf life-saving activities along the Woongarra Coast from the Go Slow Area rules.

Key amendments to the spatial extent of existing Go Slow Areas would be:

- an extension to the Boonooroo to Kauri Creek Go Slow Area to link the two existing separated sections of the Go Slow Area in this locality - this would add an additional 6.7km^2 to the current Go Slow Area of 60.4km^2 increasing the size of the area by 11%, to a total of 67.1km^2
- an extension to the Kauri Creek transit lane to allow vessels to traverse the Go Slow Area on the plane
- a new transit lane to provide access to the boat ramp at Tinnanbar
- an addition of 12.0km^2 to the current Burrum Heads Go Slow Area, increasing the size of the Go Slow Area by 112%, from 10.7km^2 to 22.7km^2
- an extension to the Moon Point Go Slow Area to aid in reducing vessel speed upon entering the Go Slow Area's shallower waters and incorporate creek entrances where turtles bask - this would add an additional 14.2km^2 to the current Go Slow Area increasing the size of the area by 74%, from 19.2km^2 to 33.3km^2.

Potential benefits

- An increase in the size of some existing Go Slow Areas and establishing a new Go Slow Area in areas of core shallow water habitat for turtles and dugong is expected to reduce the risk of vessel strike which can cause disease, injury and/or mortality to these species. This has been the case in Moreton Bay Marine Park.
- In turn this is expected to contribute to long-term conservation outcomes for populations of endangered and vulnerable turtles and dugong. Australian humpback dolphins are also expected to benefit from vessels travelling slower in shallow water habitat, although data on incidence of vessel strike for these animals is lacking.
- Allows authorised surf life-saving patrols and training activities to be lawfully conducted in the Woongarra Coast designated Go Slow Area, maintaining this essential public service. The inclusion of conditions on a marine park permit would mitigate environmental risks of conducting the activity.

Potential costs

- An increase in the size of some existing Go Slow Areas and establishing a new Go Slow Area at Reef Islands may increase the amount of time needed for commercial fishers to set and retrieve fishing gear (particularly nets and crab pots) and limit opportunities for the placement of this gear in tide restricted areas. This impact has been reduced by limiting the size of the Go Slow Areas and locating them away from high use commercial fishing areas where possible.
- An increased sense of inconvenience for some recreational vessel operators.
- A new regulatory impost on providers of authorised surf-life saving activities in the time required to apply for and maintain currency of a marine park permit. Depending on the nature of conditions imposed, a cost may be incurred to ensure compliance with permit conditions.
- Creates a very small increase in costs to government to administer surf-life saving permits (approximately $4800 every 5 years for the administration and assessment of the permit application)
- Cost to government of an additional $12,000 annually to enforce the provisions of an expanded Go Slow Area network for turtle and dugong protection. Current costs are approximately $33,000 annually.

In summary this option would reduce the risk of a key threat to the long-term population recovery of turtles and dugongs with minimal cost to the community. Benefits outweigh the costs and a net benefit for Queensland is expected.

Preferred approach to reduce threat to turtles, dugong, and dolphins from vessel strike

Option 2 is the preferred approach as Option 1 would not address the problem of vessel strike of threatened species in known areas of core shallow-water habitat that results in injury, disease or mortality. Option 1 does not meet the objective of the zoning plan review – *to improve the protection and conservation of threatened species*. By progressing Option 2, protection of air-breathing threatened species is improved in areas of the marine park where they are most vulnerable - shallow water and edges of sand banks where vessels traverse at low tide. Costs to the community are mainly associated with commercial fishers in the time taken to traverse Go Slow Areas and access all fishing grounds within tidal cycles. Under Option 2, the conservation benefits in protecting threatened species most vulnerable to vessel strike outweigh the costs to commercial fishers, vessel users, surf life-saving providers, and the Government.

Appendix 6 shows the location of the designated Go Slow Areas for turtles and dugong. Appendix 9 and Appendix 10 outline the proposed provisions and changes to the current zoning plan.

6.3.3.6 Reduce the risk to turtles from human disturbance at Mon Repos

At the internationally significant turtle rookery at Mon Repos, the designated Mon Repos Area aims to protect turtles and their habitats and minimise harm or distress to turtles from humans and domestic animals. Special management provisions to achieve this are in place between 15 October and 30 April. These rules enable the management of human activities, and between 6pm and 6am, prohibit vessels, swimming, and fishing in the designated area, and manages the use of torches and lights. In addition, Bundaberg Regional Council prohibits dogs on Mon Repos beach all year-round.

The Mon Repos Turtle Centre, operated by DES, runs ranger-led 'Turtle Encounter Tours' for the public to see turtles nesting and hatchlings emerging between November and March. Around 12,000 people participate annually in the nightly tours. These tours enable effective management of visitor numbers and behaviour on the beach, thereby minimising disturbance to turtles during vulnerable stages of their life. There are, however, members of the public who seek out their own turtle experience on the beach. Nesting turtles, hatchlings, and nesting sites are at risk of disturbance and interference from members of the public not part of ranger-led tours. Tour groups, and researchers undertaking turtle research on the beach or involved in relocating nests to safer sites can also be affected by members of the public accessing the beach during turtle nesting season. While the *Conditions of Entry* for Mon Repos Turtle Centre (including undertaking a Turtle Encounter Tour) state that beach access and the Mon Repos Coast walking track are closed between 6pm and 6am, the current zoning plan does not reflect this management intent.

As some hatchlings emerge late in the season (after 30 April), these hatchlings are particularly vulnerable and at risk of disturbance and interference from people when emerging from nests and making their journey to the sea.

6.3.3.6.1 Option 1 – No change to zoning plan

This option would maintain the existing provisions for the designated Mon Repos Area. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which option 2 is assessed.

6.3.3.6.2 Option 2 – Change management arrangements for designated Mon Repos Area

This is the preferred option that is reflected in the draft zoning plan

This option would amend the provisions of the designated Mon Repos Area to prohibit people from the designated area between 6pm and 6am unless they are part of a ranger-led tour, plus extend the duration of the designated area for an extra month to 31 May. A change to the boundary of the designated area would also be made to align its southern and offshore boundaries with the designated Go Slow Area to reduce complexity in the spatial extent of management layers.

Potential benefits

- By prohibiting general public access, DES would be able to regulate the total number of people on Mon Repos beach and around any one turtle or nest which is expected to reduce the risk of disturbance, interference and stress for each nesting turtle and emerging hatchlings, improve research capacity and enhance visitor experience for those participating in ranger-led tours.
- Extending the end date for the Mon Repos Area by one month to 31 May would ensure that late season hatchlings emerging from nests are not disturbed.
- Improved long-term conservation benefits for turtles as nesting success may improve.

Potential costs

- Members of the public who currently use the beach between 6pm and 6am (e.g. for walking, picnics) would no longer be able to do so. This impost is minimised by the presence of many other beaches and foreshore areas in the vicinity where access is not constrained, and the long held management measures in place through the Conditions of Entry at the Mon Repos Turtle Centre.
- Members of the public who currently use the beach and nearshore waters between 6pm and 6am for walking, swimming, fishing, or boating during the month of May would no longer be able to do so. This impost is minimised by the presence of many other beaches and foreshore areas in the vicinity where access is not constrained.
- Nil or negligible cost to government to enforce the additional provision of the designated area and for an extra month each year.

In summary, Option 2 clarifies the existing management intent at Mon Repos beach which limits public access to the beach between 6pm to 6am to ranger-led tours only. It complements the *Conditions of Entry* for Mon Repos Turtle Centre that limits public access to the Mon Repo Coast Track and beach, and is expected to benefit threatened species, researchers and visitor experiences on tours. By also extending the duration of the designated Mon Repos Area by one month, improved protection of late season hatchlings from human disturbance is expected. Financial costs associated with this change are negligible. Benefits outweigh the costs and a net benefit to Queensland is expected.

<u>Preferred approach</u> to reduce the risk to turtles from human disturbance at Mon Repos

Option 2 is the preferred approach as Option 1 would not clarify or provide a legislative basis for the existing management intent of the designated Mon Repos Area in the zoning plan that ensures numbers of people observing turtles, nests or hatchlings on the beach are limited, and only people on ranger-led tours are allowed on the beach overnight between 6pm and 6am. Option 2 is the only option that meets the zoning plan objective – *to improve the protection and conservation of threatened species.* Option 1 would not provide conservation benefits for late season hatchlings emerging from nests after 30 April as Option 2 would, and leaves hatchlings at risk of disturbance at a highly vulnerable time in their life cycle. Costs associated with Option 2 are minimal.

Appendix 9 and Appendix 10 outline the proposed provisions and changes to the current zoning plan respectively.

6.4 Protection of cultural values

6.4.1 Issue

There are six groups of First Nations peoples with a connection to the land and sea Country within the Great Sandy Marine Park (GSMP) – the Bailai, Gurang, Gooreng Gooreng, Taribelang Bunda peoples, the Butchulla people and the Kabi Kabi people. This connection and the rights and responsibilities of First Nations peoples to Care for Country have existed for tens of thousands of years and continues into the future. The legacy of living in this Country over this time has resulted in significant cultural resources continuing to exist over and within the landscape for First Nations peoples. Cultural resources include places or objects having anthropological, archaeological, historical, scientific, sociological, spiritual or visual significance or value, including significance or value of that kind under Aboriginal tradition and custom. In conserving the marine environment, the *Marine Parks Act 2004* also places an emphasis on protecting the resources of marine parks that are of cultural significance.

The *Human Rights Act 2019* (QLD) recognises that Aboriginal peoples and Torres Strait Islander peoples hold distinct cultural rights (section 28). Among these are the right to enjoy, maintain, control, protect and develop identity and cultural heritage, language, kinship ties, and distinctive spiritual, material and economic relationship with the land, territories, waters, coastal seas and other resources. In addition, the *Legislative Standards Act 1992*

(section 4(3)(j)) requires Queensland legislation to have sufficient regard to Aboriginal tradition and Island custom to avoid unintended legislative impacts on traditional practices.

Some of the key threats to cultural values in the GSMP include physical disturbance of places and objects from public visitation, and boating activities. Vessel noise, particularly from the operation of vessels at speed, impacts the enjoyment of Country and use of areas important for the practice of cultural and spiritual activities and knowledge sharing with younger generations. Vessel wash can threaten the integrity and preservation of cultural resources. Shell middens and other culturally significant areas or sites in the intertidal and shallow subtidal zones are particularly susceptible to erosion from vessel wash and scarring by propellers. The risk of degradation and loss of cultural heritage sites such as burial grounds and shell middens is exacerbated by rising sea level, with eroding coastlines resulting in exposure of sacred sites and submersion of sites that were once on dry land.

Recognition of the cultural importance of some sites within the marine park is currently provided through six designated Fish Trap Areas; one at Woody Island and five at Booral. The aim of these areas is to protect important sites by prohibiting anchoring or the removal of material from within these areas.

Consultation feedback to date

Key feedback and suggestions to date include:

- Increase protection of culturally significant sites.
- Greater protection of Aboriginal cultural heritage resources that exist below highest astronomical tide.
- A greater role for First Nations peoples in management of the park and its cultural resources.

Engaging with First Nations peoples who have a connection to the land and sea Country within the GSMP is a key component of the zoning plan review process. Proposed management changes across the marine park that focus on improved protection of habitats and threatened species, align broadly with the aspirations of many First Nations peoples received to date for the conservation of Country to ensure a sustainable future for all. The management issues and options proposed and discussed below focus on protecting specific areas of cultural value in Tin Can Inlet, informed by the aspirations of the Kabi Kabi First Nations people for their Country. Engagement with other First Nations peoples' representative bodies to protect specific areas of cultural value in the sea Country of the Bailai, Gurang, Gooreng Gooreng, Taribelang Bunda (northern section of the marine park) and the Butchulla people (central section of the marine park), as well as the Kabi Kabi people, is ongoing.

The problem

The Kabi Kabi people have a strong connection with the land and sea Country of Tin Can Inlet. Areas within the Inlet and its creeks, such as Carland Creek, are culturally important for the Kabi Kabi people to connect to Country in a peaceful and respectful environment and preserve the cultural values of the area, undisturbed and unimpacted by vessel noise and wash. Searys and Cooloola Creeks are important for the conduct of cultural activities that require a level of privacy to undertake, without disturbance by vessel noise and traffic. Shell midden sites, within the intertidal and shallow subtidal areas throughout the Inlet and its creeks, are at risk of erosion from sea level rise associated with climate change which is exacerbated by vessel wash.

There currently are no specific management arrangements in this part of the marine park to preserve the cultural importance of the area and support the aspirations of the Kabi Kabi people. Without supportive management, the impacts of vessel usage on the ability to connect to Country and preserve the cultural values of the area will continue and are likely to worsen with increased use of the marine park in the future as vessel ownership and urban development in the region rises along with the compounding impacts of climate change.

The designated Fish Trap Areas at Woody Island and Booral are delineated by a 200m radius from a central point. However, the five Fish Trap Areas at Booral spatially overlap resulting in a complex system of boundaries and the coordinates used to mark the central point of the Fish Trap Area at Woody Island are outside the marine park.

6.4.2 Carland Creek

6.4.2.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements in place at Carland Creek. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.4.2.2 Option 2 – Establish a Go Slow Area for natural and cultural values

This is the preferred option that is reflected in the draft zoning plan

This option would establish a designated Go Slow Area in Carland Creek for the purpose of protecting natural and cultural values. The Go Slow Area would implement restrictions on the way vessels are operated to reduce the degradation of cultural sites such as middens and the impacts of vessel use, e.g. noise and speed, on the creation of a peaceful and respectful environment for First Nations peoples to connect to Country the Go Slow Area would mirror the extent of the extended Marine National Park (MNP) zone proposed for Carland Creek in section 6.1.1.3. Within a designated Go Slow Area of this type, vessels would be required to operate off the plane or in non-displacement mode or at a speed less than 6 knots. Motorised water sports would also be prohibited, which means an activity involving any of the following:

- driving a motorised vessel other than in a straight line, including, for example—
  - in a circular pattern; or
  - by weaving or diverting the vessel; or
  - by surfing down, or jumping over or across, any wave, swell or wash, other than for any necessary turn or diversion.
- towing a person behind a motorised vessel, including, for example, waterskiing or parasailing;
- the use of a personal watercraft (PWC) other than for transport by the most direct reasonable route between two places.

Potential benefits

- The new Go Slow Area is expected to reduce the noise and speed of vessels that impede the ability of First Nations peoples to connect to Country and degradation of shell middens by reducing erosion caused by vessel wash.
- With First Nations peoples' permission to promote the values of the area in educational material, the specific management arrangements may assist in raising awareness of the marine park's cultural resources and their significance to First Nations peoples.
- Respects native title rights and the aspirations of First Nations peoples.
- Reflects provisions (section 28) of the *Human Rights Act 2019 and* the distinct cultural rights of First Nations peoples by recognising the priorities and perspectives of First Nations peoples in management of the marine park.
- Indirectly helps to protect turtles and dugongs from injuries and mortalities associated with vessel strike in shallow areas.

Potential costs

- Imposes a restriction on the operation of vessels in Carland Creek, however the area is small (2.9km^2) and represents 0.05% of the total area of the marine park.
- As the area largely coincides with an existing MNP zone, there would be minimal impact on vessel users accessing the area for commercial or recreational fishing.
- Nil or negligible additional cost to government to enforce the provisions of the Go Slow Area as an MNP zone exists in the area already.
- A maximum penalty of 100 penalty units is proposed for non-compliance with the Go Slow Area for natural and cultural values provisions. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

This option complements the objects of the underlying MNP zone and applies an existing and widely understood marine park management tool (Go Slow Area) to protect an area of cultural significance to First Nations peoples. Costs on the community and government are very low, therefore a net benefit to Queensland is expected.

6.4.2.3 Option 3 – Rely on proposed MNP zone expansion

This option would rely on the Marine National Park (MNP) zone proposed to be extended as part of the objective to improve habitat protection, as described in section 6.1.1.3, to reduce impacts of vessels, eg. noise and speed on the premise that fewer vessels would be accessing the area due to the prohibition of fishing and collecting in the MNP zone. The extension of the existing MNP zone in Carland Creek would include the inlet on the northern side of Teebean Point to increase representation of shallow water estuarine habitats at this southern extent of the marine park.

Potential benefits

- The MNP zone would reduce, but not eliminate, the likelihood of vessel traffic travelling at speed and the associated vessel impacts as the reasons for visiting the area would be reduced.

Potential costs

- Would not specifically respect native title rights and the aspirations of First Nations peoples.
- Would not reflect provisions (section 28) of the *Human Rights Act 2019* and the distinct cultural rights of First Nations peoples as the priorities and perspectives of First Nations peoples in relation to the protection of an important cultural site, would not be specifically recognised in the management of the marine park.
- The risk of vessel noise and speed impeding connection to Country and erosion of middens would continue as the MNP zone would not regulate vessel speed or operation.

Although the proposed expansion to the MNP zone would likely serve to reduce vessel traffic in the area, this option would not directly address or eliminate the risk of vessel impacts on connection to Country and cultural values. There would be no impost to vessel users as vessels would still be able to traverse the MNP zone at speed, or cost to government.

Preferred approach to protect cultural values of Carland Creek

Option 2 is the preferred approach as it applies an existing and widely accepted marine park management tool (Go Slow Area) that is likely to be the most effective in reducing the impacts of vessel noise and speed on the ability of First Nations peoples to connect to Country and shell middens while still recognising and allowing the use of recreational vessels in the area. It directly recognises and seeks to manage values of importance to First Nations peoples and imposes minimal cost on the community and government. It is therefore expected to provide a net benefit to Queensland.

See Appendix 6 for a draft map of the designated area. Appendix 9 and Appendix 10 outline the proposed provisions and changes to the zoning plan.

6.4.3 Searys and Cooloola Creeks

6.4.3.1 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements in Searys Creek and Cooloola Creek. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.4.3.2 Option 2 – Establish a No Motorised Vessel Area in Searys Creek and Cooloola Creek

This is the preferred option that is reflected in the draft zoning plan

This option would establish a designated No Motorised Vessel Area that would prohibit the use of a motorised vessel or vehicle in the area. By implementing restrictions on the type of vessels that can access these two culturally important estuaries, the designated area aims to reduce vessel noise and traffic, allowing cultural activities to be undertaken in relative peace and solitude. These restrictions would also reduce vessel wash and minimise erosion and degradation of significant cultural sites throughout the area. The No Motorised Vessel Areas would restrict use to watercraft such as kayaks, canoes and stand-up paddle boards within an area that mirrors that of the expanded Marine National Park (MNP) zones in these estuaries as proposed in section 6.1.1.3.

Potential benefits

- The two new designated No Motorised Vessel Areas are expected to reduce visitation and improve the amenity of Searys and Cooloola Creeks for First Nations peoples, as well as other users of the area, seeking peaceful enjoyment of this part of the marine park.
- With First Nations peoples' permission to promote the values of the area in educational material, the specific management arrangements may assist in raising awareness of the marine park's cultural resources and their significance to First Nations peoples.
- Respects native title rights and the aspirations of First Nations peoples.
- Reflects provisions (section 28) of *the Human Rights Act 2019 an*d the distinct cultural rights of First Nations peoples by recognising the priorities and perspectives of First Nations peoples in management of the marine park.

- Indirectly helps to protect turtles and dugongs from injuries and mortalities associated with vessel strike from motorised vessels in shallow areas.

Potential costs

- Imposes restrictions on motorised vessel users seeking to access Searys and Cooloola Creeks, however the designated areas are small in size and together occupy 4.41km^2 or 0.07% of the total area of the marine park.
- As the areas largely coincide with existing MNP zones, there would be minimal impact expected on users accessing the area for fishing in motorised vessels.
- Nil or negligible additional cost to government to enforce the provisions of the No Motorised Vessel Areas as two MNP zones exist in the area already.
- A maximum penalty of 100 penalty units is proposed for non-compliance with the No Motorised Vessel Area provisions. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

This option complements the objects of the underlying MNP zone and would enable peaceful and respectful enjoyment of the natural and cultural values of the area by First Nations peoples and other users of the marine park. Costs on the community and government are negligible.

6.4.3.3 Option 3 – Rely on proposed MNP zone expansion

This option would rely on the Marine National Park (MNP) zone proposed to be extended in these estuaries, as discussed in section 6.1.1.3, to reduce the numbers of motorised vessels using these estuaries on the premise that fewer vessels would be accessing the area due to the prohibition of fishing and collecting in the MNP zones.

Potential benefits

- The MNP zones would reduce, but not eliminate, the likelihood of motorised vessels accessing these estuaries as the reasons for visiting the area would be reduced.

Potential costs

- Would not specifically respect native title rights and the aspirations of First Nations peoples.
- Would not reflect provisions (section 28) of the *Human Rights Act 2019 and* the distinct cultural rights of First Nations peoples as the priorities and perspectives of First Nations peoples in relation to the protection of an important cultural site, would not be specifically recognised in the management of the marine park.
- The risk of activities occurring that disturb the amenity of the area would continue as the MNP zones would not regulate the types of vessels that can enter and use these culturally significant estuaries.

Although the proposed expansion to the MNP zones would likely serve to reduce vessel traffic in the area, this option would not directly address impacts to amenity from the noise of motorised vessels and the impacts this has on First Nations peoples' rights of use and enjoyment of the area. There would be no impost to vessel users as vessels would still be able to access the MNP zones, and no cost to the broader community or government.

<u>Preferred approach</u> to protect cultural values of Searys and Cooloola Creeks

Option 2 is the preferred approach as it directly recognises and seeks to manage values of importance to First Nations peoples, by using a bespoke and fit for purpose marine park management tool. The designated No Motorised Vessel area is expected to be the most effective at reducing the risk of noise disturbing cultural practices in the area and would also reduce the impacts of vessel wash on culturally significant sites, e.g. middens. Option 2 complements the objects of the underlying MNP zone and protects the amenity value for the appreciation and peaceful enjoyment of the natural integrity and cultural values of the area across a range of marine park user groups. Costs to the community and government are very low and is therefore expected to provide a net benefit to Queensland.

See Appendix 6 for a draft map of the designated areas. Appendix 9 and Appendix 10 outline the proposed provisions and changes to the zoning plan.

6.4.4 Designated Fish Trap Areas

To better protect the five Fish Trap Areas at Booral and improve compliance with and enforcement of the management provisions, it is proposed to combine the five separate areas into one spatially defined area that encompasses all five existing Fish Trap Areas. See Appendix 6 for a draft map of the combined Fish Trap Area.

To remove uncertainty, and minimise confusion, it is proposed to remove the designated Fish Trap area from Woody Island, noting that protection of the fish traps in the vicinity of Woody Island can be implemented in future, once more accurate mapping of this cultural resource can be undertaken.

6.5 Management of Platypus Bay to complement K'gari management

6.5.1 Issue

Platypus Bay is adjacent to the Great Sandy National Park and includes part of the K'gari (Fraser Island) World Heritage Area which extends 500m into the waters of the Great Sandy Marine Park (GSMP).

The north-eastern area of Platypus Bay between Wathumba Creek and Rooney Point is one of the most remote inshore areas of the marine park with no adjacent settlements, campgrounds, beach access for vehicles or other infrastructure. It supports a range of ecological values and provides remote natural experiences for marine park users. The area is a popular anchorage and is frequented by charter fishing and whale watching vessels. From July to November, Platypus Bay is a critical resting area for several whale species on their return migration to Antarctica and hence provides unique whale watching experiences. On average, early pregnant humpback whales, and mother-calf pairs with attendant males spend up to two weeks in the area for maternal care and social activity. As with dugong and turtles, humpback whales (especially mothers and calves) are at risk of vessel strike and disturbance while they are resting in the Bay. Disturbance can increase energy use with implications for the growth potential of calves. In relation to this area of the marine park, feedback received by the Department to date has focussed on the importance of Platypus Bay for the reproductive success of humpback whales and other whale species with some people, including whale researchers, requesting better protection for humpback whales while they are in the marine park. Suggestions have included greater protection of humpback whale habitat, the introduction of a designated Go Slow Area and restricted 'no go' areas where humpback whales are nurturing calves.

In 1994, the Queensland Government, through the Great Sandy Region Management Plan indicated its intention to manage the northern part of K'gari as a remote area from a recreation, tourism and visitor use perspective. As such, this area of K'gari has a zone 1 visitor management classification which means that the area is managed for its totally or almost totally natural landscape with minimal evidence of current human activity. The general visitor experience is one of self-reliance in a wilderness setting with a high degree of isolation and sense of solitude. The remote classification limits access to pedestrians only with other activities being restricted to maintain the isolation and undeveloped character of the area.

There are currently no management arrangements in the GSMP zoning plan to complement the management objectives for the northern part of K'gari (Great Sandy National Park) and/or to provide similar opportunities for peaceful enjoyment of the adjoining area in the marine park. In north-eastern Platypus Bay, vessels can be involved in activities such as tubing and water-skiing, and personal watercraft can be driven erratically and wave jump. These noisy and erratic modes of vessel operation can impact amenity and social values (e.g. naturalness, tranquillity, appreciation and personal connection) for other users and create a risk of vessel strike and disturbance to humpback whales and other wildlife. The Department of Transport and Main Roads has predicted a13% increase in vessel registrations over the next decade, which is expected to increase the risk of disturbance to amenity and natural values of the area. There is a growing area of research that shows the social, physical and psychological benefits that natural areas can have on a person's wellbeing and that these values are important to recognise and protect.

Options to complement adjacent land management on K'gari in the marine park, while allowing for continued use of the area (subject to the underlying zone) are discussed below.

6.5.2 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements in Platypus Bay in relation to vessel operation. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.5.3 Option 2 – Establish a designated No Motorised Vessel Area

This option would establish a designated No Motorised Vessel Area in north-eastern Platypus Bay, between Rooney Point and where latitude 24°56.1'S intersects the beach on the western side of K'gari (approximately

5.4km north of the Wathumba Creek mouth). Vessel access to the area, which is approximately 30km^2 in size (0.5% of the park), would only be allowed by those propelled by wind or human power (e.g. sailing boats, kayaks and stand-up paddle boards) to help protect the natural integrity and amenity values of this relatively undisturbed and remote area of the marine park. The operation of aircraft would also be prohibited.

Potential benefits

- Fully complements the landscape setting of the adjacent protected area and the management arrangement that prohibits vehicles from accessing the beach between Wathumba Creek and Sandy Point lighthouse, by providing a quiet environment for visitors to enjoy the marine park, national park and World Heritage Area.
- Increased safety for passive (e.g. non-motorised) recreational users of the area.
- Eliminates potential for vessel strike of whales and other marine fauna such as turtles from fast moving vessels.

Potential costs

- Vessel and personal safety may be compromised if a vessel using engine power needs to return to sheltered waters to avoid inclement weather, for example, but cannot access the designated area. However, entry to the area by a motorised vessel in an emergency would be considered a reasonable excuse to contravene the provisions of the area.
- The north-eastern part of Platypus Bay is a safe haven for vessels seeking protection from northerly and easterly winds and a popular overnight anchorage for cruising yachts and bare boat charter vessels, which routinely access the area under engine. The designated area would prevent this activity with flow on socio-economic impacts to tourism in the area.
- Commercial whale watching vessels, other motorised tourist vessels and commercial fishing vessels would be prevented from using the area, potentially requiring these industries to modify the location of operations away from this sheltered area of Hervey Bay and the ability for the public without access to their own non-motorised vessel from visiting and enjoying this remote area of the marine park.
- Cost to government of approximately $2500 annually to enforce the provisions of the No Motorised Vessel Area.

A designated area of the type described in Option 2 would eliminate the risk of noise disturbance to visitors and the risk of vessel strike to humpback whales and other marine fauna but would create a significant and unacceptable imposition on existing and future commercial and recreational use of the area. There would be no net benefit if this option was adopted.

6.5.4 Option 3 – Establish a designated area to prohibit motorised watersports and aircraft

This is the preferred option that is reflected in the draft zoning plan

This option would establish a new type of designated area (the Platypus Bay area) in north-eastern Platypus Bay between Rooney Point and where latitude 24°56.1'S intersects the beach on the western side of K'gari (approximately 5.4km north of the Wathumba Creek mouth). Motorised watersports and the taking off and landing of fixed wing aircraft and helicopters would be prohibited in the area, which is approximately 30km^2 in size (0.5% of the park), to help protect the natural integrity and amenity values of this relatively undisturbed and remote area of the marine park.

Motorised water sports generate noise, pose a risk to wildlife, and involve the following activities:

- driving a motorised vessel other than in a straight line, including, for example—
  - in a circular pattern; or
  - by weaving or diverting the vessel; or
  - by surfing down, or jumping over or across, any wave, swell or wash, other than for any necessary turn or diversion;
- towing a person behind a motorised vessel, including, for example, waterskiing or parasailing;
- the use of a personal water craft other than for transport by the most direct reasonable route between two places.

Similarly, the landing and taking off of helicopters and fixed wing aircraft, such as seaplanes and ultralights, generate significant amounts of noise. Whilst unable to take off or land, fixed wing aircraft would be allowed to travel through the waters of the area as if they were a vessel. Commercial fishers undertaking lawful commercial

fishing activities within the area (e.g. seine netting) would be exempt from the special management provisions for motorised watersports, as fishing vessels undertaking this sort of netting need to drive a course, other than a straight line, to set nets.

Potential benefits

- Significantly complements the landscape setting of the adjacent protected area and the management arrangement that prohibits vehicles from accessing the beach between Wathumba Creek and Sandy Point lighthouse, providing a quiet environment for visitors to enjoy the marine park, national park and World Heritage Area.
- Significantly reduces the disturbance to users of the marine park and adjacent national park and World Heritage Area from vessel noise and anti-social nuisance behaviour associated with fast and/or erratic operation of motorised vessels and aircraft noise, allowing for increased opportunities to appreciate the quiet and remote amenity values in the area.
- Significantly reduces the risk of vessel strike to resting whales (in particular, mothers and calves) and turtles.
- Allows all vessels to continue to travel through and utilise the area, provided they are not driven in an erratic manner, minimising socio-economic impacts on commercial and recreational use of the area.
- Increased safety for passive recreational users in the area.
- Proposed exemption provision is expected to minimise impacts on fishers conducting a lawful commercial fishing activity (e.g. seine netting).
- Enhanced experiences are expected for patrons on board commercial whale watching vessels. Whale watching in the GSMP is a regionally significant tourism activity during the months of July to November each year and Platypus Bay is a critical area for Hervey Bay's whale watching tourism industry.

Potential costs

- Potential lost opportunities for future tourist operators who may wish to offer activities such as tubing and banana boat rides in this area.
- Cost to government of approximately $2500 annually to enforce the provisions of the no motorised watersports area.
- A maximum penalty of 100 penalty units is proposed for non-compliance with the Platypus Bay Area provisions. In the event that a magistrate determines a person to be guilty of an offence of this nature, a financial cost may be imposed on that person.

A designated area of the type described in Option 3 would eliminate a key source of noise pollution from the erratic operation of vessels impacting the amenity of the area, which has the potential to increase in the future as vessel registrations increase. Given the current usage of the area, socio-economic impacts on existing commercial and recreational use are expected to be negligible. This option takes a precautionary approach to deliver a net benefit.

<u>Preferred approach</u> to complement management on K'gari (Fraser Island)

Option 3 is the preferred approach as it limits noise and nuisance impacts generated by motorised watersport activities and aircraft to visitors in north-eastern Platypus Bay and adjacent K'gari World Heritage Area while not compromising vessel safety. Elimination of erratic vessel movements in the area will also reduce the potential for injury to humpback whales and calves from vessel strike. Option 3 is a precautionary measure to ensure the long-term protection of the remote natural amenity values of the area from increasing vessel and personal watercraft ownership and use in the Region. The proposed designated Platypus Bay Area special management provisions align with arrangements in place to manage the K'gari section of the Great Sandy National Park and will allow for the appreciation and enjoyment of the natural integrity of this remote area of the marine park. Option 3 will impose minimal cost to the community and government and is therefore expected to provide a net benefit to Queensland.

See Appendix 6 for the location of the proposed designated area and Appendix 9 for an outline the proposed provisions.

6.6 Coastal management and alignment with declared Fish Habitat Areas

6.6.1 Issue

Coastal management and development

Local government plays a key role in reducing the potential impact of coastal erosion on property and infrastructure through activities such as dune restoration, beach nourishment, sand pushing, channel re-alignment and coastal

protection works such as groynes and revetments. Local governments need to manage a variety of risks associated with climate change, including how far and at what rate sea level will rise, changes to storm behaviour and associated storm surges, varying coastline responses to rising seas and changed storm behaviour, and assess how resilient environmental, economic and social assets in the coastal zone will be. The current Great Sandy Marine Park (GSMP) zoning plan has widespread Conservation Park (CP) zones along shorelines adjacent to urban areas and coastal communities, which significantly restrict the ability of local councils to undertake these activities at scales required to respond to the risks associated with climate change.

A number of coastal locations require a change in zoning to facilitate coastal management and appropriate or necessary development activities, such as Wanggoolba Creek, a small estuary on the west coast of K'gari within the Great Sandy Strait. Vehicle and passenger barges travel between River Heads and Wanggoolba Creek, transporting tourists and residents between the mainland and K'gari. Deepening and widening of the channel to allow for all-tide access has been identified as an urgent need by emergency services organisations and tourism operators on K'gari.

A need to change the marine park zoning in other coastal locations to enable local governments to undertake small scale and/or large-scale beach nourishment programs in the future has been expressed by both Fraser Coast and Bundaberg Regional Councils. 'Soft' engineering solutions such as beach replenishment are preferred by the department to hard engineering such as groynes and revetments, which can interfere with natural coastal processes.

Within the Bundaberg Regional Council area, erosion problems are occurring at various locations including Woodgate Beach, Moore Park Beach, Nielsen Beach and Miara, noting that the current zoning at these locations allows for applications to be made for erosion control works. However, projected sea level rise and more intense storms from a changing climate are expected to increase and extend these risks. The *Bundaberg Region Coastal Hazard Adaptation Strategy and Action Plan* outlines prioritised options for the Council to address current and predicted coastal hazards that will require a level of management intervention at several locations.

Like Bundaberg Regional Council, Fraser Coast Regional Council (FCRC) has prepared a plan to identify actions to be taken to adapt and manage coastal hazard risks from storm tide inundation, permanent inundation from sea level rise and coastal erosion. One of the primary actions identified by FCRC in its *Coastal Futures Strategy* is the potential use of small scale, and in some circumstances large scale (where permissible and practical), beach nourishment to protect public assets. The Strategy identifies that the current marine park zoning in the following areas is a significant impediment to undertaking beach nourishment:

- Burrum Heads and surrounds
- Toogoom
- Craignish, Dundowran, Eli Waters and surrounds and
- Dayman Spit as a source of sand for beach nourishment along the Hervey Bay Esplanade from Point Vernon to Urangan.

By not addressing these concerns, local government will continue to be prevented from undertaking coastal protection works in response to increasing impacts associated with climate change, including storm surge, sea level rise and inundation of low-lying areas, resulting in the potential loss of private, community and local government assets and infrastructure.

Widespread CP zones along shorelines also restrict potential adjacent land-based aquaculture (e.g. prawn farms) as there is no certainty that seawater intake and discharge structures would be approved under the zone entry or use provisions. Aquaculture is likely to supply an increasingly significant proportion of Queensland's seafood production and benefits regional communities through skills development and job creation. Previous planning by the Department of Agriculture and Fisheries to identify Aquaculture Development Areas in the Wide Bay Burnett region was constrained by the uncertainty of intake and discharge structure approval in CP zones.

Transitional provisions in the Marine Parks (Declaration) Regulation 2006 provide that a development approval under the repealed *Integrated Planning Act 1997* that existed when the marine park commenced in 2006 authorises entry or use in the marine park for that purpose (i.e., a marine park permission is not required). These provisions are outdated and do not allow for assessment of development works under a contemporary marine park assessment framework or consultation with First Nations peoples to ensure impacts of development on the marine environment and First Nations peoples' cultural resources are minimised. This is particularly an issue for approvals that authorise ongoing works (e.g. beach nourishment) rather than 'one-off' works such as construction of a jetty.

Declared Fish Habitat Areas

Within GSMP there are 11 declared Fish Habitat Areas (FHA), a type of marine protected area that protects areas of high value inshore and estuarine fish habitats from physical disturbance associated with coastal development (Appendix 7). FHAs are managed by the Department of Environment and Science and are declared under the *Fisheries Act 1994* and Fisheries (General) Regulation 2019. Areas within an FHA are assigned a management level, either 'A' for very strict management or 'B' where existing or planned use requires a more flexible management approach. Depending on the management level, a declared FHA will result in limitations on the scale of structures that can be approved (within management B areas) or will prohibit the construction of some structures (within management A areas).

In terms of coastal development, the management objectives of FHA management A areas generally align with the objectives and provisions of a marine park CP zone and FHA management B areas generally align with management provisions of a marine park Habitat Protection (HP) zone. Declared FHA management provisions are prescriptive in terms of the type of development that can be undertaken, as approval can only be issued for a 'prescribed development purpose' listed in the Fisheries (General) Regulation 2019, whereas the entry and use provisions of marine park zones allow for works to be undertaken that are consistent with the objects of the zone type.

There are several locations where the management level of a declared FHA does not align with the marine park zone type resulting in one marine protected area type potentially allowing development works to be approved and the other prohibiting it. This has resulted in confusion for stakeholders about appropriate development in particular places and a lack of certainty for applicants about likely outcomes of development applications under different assessment processes. This contradictory management and messaging has the potential to undermine stakeholder and public understanding of and support for marine protected area management.

For example, an area at River Heads was identified by the River Heads Progress Association as a future marina site prior to the declaration of the marine park, hence the current General Use (GU) zone at this site. However, the management A FHA at this site prevents marina development; the Wide Bay Burnett Regional Plan (prepared under the Planning Act) does not identify a future marina at this site; and no marina proposal has been progressed. A previous seabed lease at the site no longer exists.

Consultation feedback to date

Much of the feedback from local government focused on amendments required to the zoning plan to allow coastal protection works to be undertaken in the marine park citing an increase in impacts of climate change, including greater damage to coastal assets caused by more severe storm events. Local governments and community progress associations are strongly in favour of zoning changes to enable erosion management, particularly the use of beach replenishment as a means of erosion control. The Department of Transport and Main Roads requested the non-conforming use that allows application for permission to dispose spoil for beach replenishment in the CP zone near the mouth of Snapper Creek, be maintained as a future dredge spoil disposal site for the Snapper Creek Boat Harbour.

Key feedback and suggestions to date:

- Amend the zoning in the vicinity of Dayman Spit so sand can be used as a source of nourishment material for Hervey Bay beaches.
- Change zoning or develop new management provisions to allow beach scraping for maintenance of vehicle beach access points on K'gari (Fraser Island).
- Change the zoning at selected locations (e.g. adjacent to developed foreshores) to allow erosion management for climate change resilience works by local government.
- A range of views were expressed on private structures such as jetties and boat ramps, including streamlining the authorisation process for private structures, prohibiting private structures, minimising the number of private jetties and boat ramps, and adjusting the zoning in places to allow for particular structures.
- A range of views were expressed on dredging within the park, from prohibiting the activity to proposals for dredging in particular locations for specific purposes.
- Allow zoning to provide for a future marina at River Heads.

The problem

In summary, the current extent of CP zoning in the marine park adjacent to urban areas precludes the ability to undertake coastal management activities to address the impacts of climate change through works such as beach nourishment, improve access at identified transport nodes and allow for new private infrastructure at existing development nodes, and conflicts with existing declared FHA management in some locations. In addition,

transitional provisions in the Marine Parks (Declaration) Regulation 2006 are outdated and do not allow for assessment of development works under a contemporary marine park assessment framework or require consultation with First Nations peoples to ensure impacts of development on the marine environment and cultural resources are minimised.

6.6.2 Option 1 – No change to zoning plan

This option would maintain the existing zoning plan arrangements. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which options 2 and 3 are assessed.

6.6.3 Option 2 – Amend the 'entry or use with permission' provisions for CP zones

This option would amend the current entry or use provisions for CP zones to allow for greater likelihood of a positive assessment decision for coastal management works such as beach replenishment, dredging to expand existing transport access nodes, and new private infrastructure, subject to assessment and approval.

Potential benefits

- Amending the provisions for CP zones to allow applications for beach replenishment would enable local governments to respond to the impacts of climate change wherever they occur in CP zones throughout the marine park (e.g. erosion management).
- Amended provisions for CP zones would assist local governments to implement Coastal Hazard Adaptation Strategies under the Qcoast2100 program, funded by the Queensland Government in partnership with the Local Government Association of Queensland, and protect natural values identified by the community as being important during consultation on the development of the Fraser Coast Regional Council *Coastal Futures Strategy*.
- Downgrading the management of CP zones to allow for coastal development and infrastructure especially in response to climate change impacts would benefit both residents and visitors by allowing works to:
    - provide landowners adjoining the marine park more equitable private access to the marine park in waterways where pre–existing private infrastructure is prevalent
    - enhance community assets and protect foreshore areas from erosion
    - facilitate sand extraction for beach nourishment (Dayman Spit)
    - maintain/improve infrastructure such as the navigation channel at Wanggoolba Creek and powerline corridor from Tin Can Bay to Rainbow Beach.

Potential costs

- This option would compromise:
    - the objects of the CP zone (i.e., to provide for conservation of the areas within the zone)
    - the status of CP zones as 'highly protected areas' within marine parks and hence their status as Matters of State Environmental Significance under the State Planning Policy and the *Environmental Offsets Act 2014*
    - the hierarchical nature of the zoning plan by making CP zones similar to HP zones in terms of managing development.
- Stakeholder and public understanding of and support for marine protected area management would likely be undermined by contradictory management resulting from:
    - CP zone entry or use provisions inconsistent with the Commonwealth Great Barrier Reef Marine Park and the other State marine parks
    - new management conflict introduced throughout the marine park where management A FHAs and CP zones overlap (i.e., by allowing for works in CP zones, such as beach nourishment, that cannot be approved in management A FHAs).
- A cost to government to administer an increase in marine park permit assessments across the CP zones of the marine park. Although the average cost to government of each permit assessment is $4,800, a total cost cannot be quantified as the number of additional applications is unknown and would be determined by the nature and extent of coastal impacts and the capacity of local governments to respond, and on the demand for new private access structures in CP zones.

While this Option would meet the zoning plan review objective to "Enable authorisation and/or undertaking of works at various locations within the marine park to address a range of coastal management issues", it would undermine fundamental principles of the zoning plan and the CP zone and introduce management inconsistencies between marine parks that would not meet the objective to "Improve the current system of zoning to better reflect global biodiversity targets, meet contemporary marine protected area management principles for habitat protection and

deliver an integrated zoning framework to balance conservation and use of the marine park." This option would not address better alignment of declared FHA and marine park boundaries for consistent management.

6.6.4 Option 3 – Change management arrangements

This is the preferred option that is reflected in the draft zoning plan

This option would:

1. Remove transitional provisions from the Marine Parks (Declaration) Regulation 2006 that authorise development works in the marine park where a development approval existed under the repealed *Integrated Planning Act 1997* when the marine park commenced
2. Change the zoning in selected foreshore locations adjacent to coastal development nodes and coastal recreation areas to facilitate the delivery of necessary and well-planned erosion management and climate change resilience works, private infrastructure and dredging via a permit assessment process and to better align marine park and declared FHA boundaries and management in general by:
    a) Amending the current list of activities in the zoning plan that can be undertaken without permission but with notification to include works to maintain existing sandy beach access points, including use of sand from the beach, following damage from storm events
    b) Downgrading CP zones to HP or GU zones in selected foreshore locations adjacent to coastal development nodes and coastal recreation areas to facilitate delivery of necessary and well-planned erosion management and climate change resilience works
    c) Downgrading zoning over Wanggoolba Creek from CP zone to HP zone to better align zoning with channel maintenance dredging that is conducted, and proposed to increase, in this waterway
    d) Downgrading zoning over part of Dayman Spit, adjacent to the City of Hervey Bay, from CP zone to HP zone to facilitate assessments of the use of this sand spit as a source of nourishment material for Hervey Bay beaches
    e) Downgrading zoning over the Tin Can Bay to Rainbow Beach powerline corridor from CP zone to GU zone to facilitate maintenance and potential future upgrade of electricity infrastructure
    f) Removing the non-conforming use provision that allows for spoil disposal for beach replenishment purposes in the CP zone located in the Great Sandy Strait near the mouth of Snapper Creek
    g) Improving the alignment of marine park and declared FHA boundaries and management, including modifying the zoning in the Burrum and Cherwell Rivers from CP zone to HP zone to align with the existing FHA management B area and changing the GU zone at River Heads to a CP zone to align with the existing FHA management A area
    h) Amending the Fisheries (General) Regulation) 2019 and the statutory maps for each declared FHA where required to match existing management or proposed changes in the marine park (see Appendix 11).

See Appendix 4 for the location of the draft zones. Appendix 9 and Appendix 10 outline the proposed provisions and changes to the zoning plan.

Potential benefits

- Downgrading management of select coastal areas to allow for better management especially in response to climate change impacts, coastal development and infrastructure would benefit the community by facilitating the assessment of applications by local councils, for example, to undertake works necessary to protect foreshore areas and enhance coastal community assets.
- The proposed management arrangements would assist local governments to implement Coastal Hazard Adaptation Strategies under the Qcoast2100 program funded by the Queensland Government in partnership with the Local Government Association of Queensland and protect natural values identified by the community as being important during consultation on the development of the Fraser Coast Regional Council *Coastal Futures Strategy*.
- Enables local government to act promptly to maintain access points to beaches (e.g. beach access to communities and tourist accommodation on K'gari), especially following storm events, with no regulatory burden on either the local or State government.
- Downgrading the management of CP zones to allow for coastal development would benefit landowners adjoining the marine park more equitable private access to the marine park in waterways where pre–existing private infrastructure is prevalent.
- The Wanggoolba Creek zone downgrade would:
    - recognise the importance of maintaining a navigable waterway at this key access point to K'gari for the vehicle and passenger barge that operates from River Heads, and for natural disaster and

emergency responses, by allowing for future deepening of the channel for an all-tide, all-weather access point
    - allow proposed works to be assessed and permit conditions applied to mitigate any impacts, noting that habitat values within the channel have been impacted by previous dredging activities.
- The Dayman Spit (part) zone downgrade would:
    - facilitate a permitting assessment process for the Fraser Coast Regional Council to access a source of material for beach replenishment that is within the local coastal sediment transport system - this process would also allow for public notification of specific sand extraction proposals if required and the use of conditions to mitigate impacts should approvals be granted at Dayman Spit
    - improve the local tourism asset of beaches along the Hervey Bay township foreshore by facilitating access to a long-term source of sand.
- The Tin Can Bay to Rainbow Beach powerline corridor zoning downgrade would allow for future upgrade of infrastructure to ensure sufficient and reliable power supply.
- Removal of the provision for the non-conforming spoil disposal area near Snapper Creek would protect habitats (e.g. mangroves) that occur in the locality. The proposed strip of HP zone along the nearby foreshore would allow applications for spoil disposal for beach nourishment, with approval subject to assessment.
- Improved management consistency between marine parks and declared FHAs, including:
    - the proposed change from GU zone to CP zone near River Heads, to align with declared FHA management
    - the alignment of 'entry or use without permission but with notification' provisions in the zoning plan with the declared FHA accepted development requirements for consistent management of beach access points
    - greater certainty for proponents about likely outcomes of development applications under different assessment processes and consistent messaging to the community about appropriate development in particular places, including for proposed private access structures in parts of the Burrum and Cherwell Rivers.
- By removing the transitional provisions in the Marine Parks (Declaration) Regulation 2006, ongoing coastal management works would be subject to a contemporary marine park assessment process and consultation with First Nations peoples to ensure impacts on the marine environment and First Nations peoples' cultural resources are minimised.

Potential Costs

- The facilitation of coastal management and development works has the potential to create detrimental environmental impacts, however these can be largely mitigated by the application of conditions during the permit assessment process.
- A cost to government to administer an increase in marine park permit assessments where CP zones have been changed to HP or GU zones. Although the average cost to government of each permit assessment is $4,800, a total cost cannot be quantified as the number of additional applications is unknown and would be determined by the nature and extent of coastal impacts and the capacity of local governments to respond, and on the demand for new private access structures in CP zones.

Changing the management arrangements as described above would achieve the zoning plan review objective to "Enable authorisation and/or undertaking of works at various locations within the marine park to address a range of coastal management issues" at targeted locations where management intervention is required. This Option would also result in an improved ability to assess impacts on the marine environment and First Nations peoples' cultural resources from ongoing coastal management works and better alignment of declared FHA and marine park boundaries for consistent management.

<u>Preferred approach</u> to address coastal management issues and align management with declared Fish Habitat Areas

Option 3 is the preferred approach, as it achieves the zoning plan review objective to "Enable authorisation and/or undertaking of works at various locations within the marine park to address a range of coastal management issues" at targeted locations where management intervention is required, without introducing the management inconsistencies and undermining of the fundamental principles of the zoning plan and CP zone objects as Option 2 would. Compared to Option 2, Option 3 additionally provides for assessment and minimisation of development impacts through the removal of transitional provisions for development approvals and improves management consistency through better alignment of declared FHA and marine park boundaries. Option 3 is expected to deliver a net benefit to Queensland.

6.7 Maximum penalties for offences

6.7.1 Issue

The *Marine Parks Act 2004* allows for maximum penalties for offences to be prescribed in marine park zoning plans. The maximum penalty that can be prescribed for a zoning plan offence is 165 penalty units. The value of one penalty unit as at 1 July 2022 is $143.75 and this is adjusted at the start of each financial year in line with the Consumer Price Index. A maximum penalty is the highest penalty that can be imposed on a person in a court of law if they are found guilty of committing an offence against a zoning plan provision and they are used as a basis for setting the value of Penalty Infringement Notices. If a corporation is found guilty of the offence, the court may impose a maximum fine of an amount equal to 5 times the maximum fine for an individual.

Several maximum penalty amounts currently prescribed in the Great Sandy Marine Park (GSMP) zoning plan for offence provisions in four designated areas (see Table 7) do not reflect the impact that a person committing the offence may cause on the natural or cultural values of the marine park and are inconsistent with the Queensland Statute Book by being low in comparison with penalty amounts for similar offences under other legislation. For example, the current maximum penalty in the zoning plan for operating a vessel in a manner that could result in the striking of a turtle or dugong is 10 penalty units ($1,437), whereas under the Nature Conservation (Animals) Regulation 2020 failing to comply with requirements if a dugong comes within the specified caution zone around a vessel has a maximum penalty of 120 penalty units ($17,250). Further examples are provided in Appendix 12.

The current low maximum penalty amounts may be increasing the risk of persons committing an offence in the marine park by providing an insufficient deterrent. This compromises the ability of the zoning plan to effectively conserve the marine environment (the primary purpose of the *Marine Parks Act 2004*).

6.7.2 Option 1 – No change to zoning plan

This option would maintain the existing maximum penalties prescribed in the zoning plan. There would be no changes made to the zoning plan, which would not address the problem identified. This option is the base case against which option 2 is assessed.

6.7.3 Option 2 – Increase maximum penalties for some offences

This is the preferred option that is reflected in the draft zoning plan

This option would increase the maximum penalty for the offence provisions related to four types of designated areas: Fish Trap Areas, Go Slow Areas, Grey Nurse Shark Area and the Mon Repos Area. The proposed increase in the value of the maximum penalty (Table 7) better reflects the potential detrimental impacts on the marine park resulting from non-compliance. These changes would bring the value of these penalties, in line with penalties for similar offences established under other Queensland environmental legislation.

Table 7. Existing GSMP zoning plan offences for four designated areas and the proposed change to the maximum value for the offence.

Offence	Potential harm to the marine park from the activity	Existing maximum penalty (units)	Proposed maximum penalty (units)
A person must not, without a permission, enter or use an area in a Fish Trap Area for anchoring	Destruction and/or damage to cultural resources of First Nations peoples	10	120
A person must not, without a permission, enter or use an area in a Fish Trap Area for excavating, modifying, or removing material forming part	Destruction and/or damage to cultural resources of First Nations peoples.	10	120

Offence	Potential harm to the marine park from the activity	Existing maximum penalty (units)	Proposed maximum penalty (units)
A person must not, without a permission, enter or use an area in a Fish Trap Area for conducting an activity that may impact on the integrity and cultural values of the area	Disturbance of, and/or damage to cultural values and resources of First Nations peoples.	10	120
A person must not in a Go Slow Area operate a vessel in a planing or non-displacement mode	Injury to, or mortality of, marine fauna including threatened species such as turtles and dugong. Potential consequences for long-term survival of a listed threatened species.	10	120
A person must not dive between 6pm and 6am in the Grey Nurse Shark Area, unless the person has a reasonable excuse	Disturbance of, and/or changes to, the natural behaviour of grey nurse shark. Potential consequences for long-term survival of a listed threatened species.	10	100
A person who is part of a group of divers in the Grey Nurse Shark Area must not dive in the area if it would result in more than 10 divers from the group being in the water at the same time	Disturbance of, and/or changes to, the natural behaviour of grey nurse shark. Potential consequences for long-term survival of a listed threatened species.	10	100
An operator must ensure that, before a person participating in the operator's tourism program enters the water in the Grey Nurse Shark Area, the person is given information about the area restrictions for the area	Disturbance of, and/or changes to, the natural behaviour of grey nurse shark.	10	50
Section 36 A dive club or, if the club is not an incorporated entity, each relevant person for the club must, before a member or a guest of, or a visitor to, the club (the diver) enters the water in the Grey Nurse Shark Area as part of the club's diving activities, ensure the diver is given information about – (a) any restrictions applying under part 2, division 6 or 7 for entry into, or use of, the zone; and (b) the area restrictions for the grey nurse shark area	Disturbance of, and/or changes to, the natural behaviour of grey nurse shark.	10	50

Offence	Potential harm to the marine park from the activity	Existing maximum penalty (units)	Proposed maximum penalty (units)
In the Mon Repos Area, a person must not, without a permission for the area use a vehicle in the area other than for monitoring or managing turtles	Disturbance of, and/or changes to, the natural behaviour of a listed threatened species. Injury to, or mortality of, nesting turtles and hatchlings. Potential consequences for long-term survival of marine turtle species.	10	100
In the Mon Repos Area, a person must not, without a permission for the area bring a domestic animal into the area, or allow a domestic animal under the person's control to enter or use the area	Disturbance of, and/or changes to, the natural behaviour of a listed threatened species. Injury to, or mortality of, nesting turtles and hatchlings. Potential consequences for long-term survival of marine turtle species.	10	100
In the Mon Repos Area, a person must not enter the area between 6pm and 6am, without a permission	Disturbance of, and/or changes to, the natural behaviour of a listed threatened species. Potential consequences for long-term survival of marine turtle species.	10	100

Potential benefits

- In combination with education and awareness programs the proposed change would provide an indication to the community and the judicial system of the serious nature of committing the offence in terms of its potential detrimental impacts on the natural and cultural values of the marine park.
- In combination with education and awareness programs the increased deterrent to committing an offence and hence subsequent compliance with management provisions is expected to improve the status of local populations of various threatened species and the integrity of cultural resources of importance to First Nations peoples.

Potential costs

- A ten to twelve-fold increase in the maximum financial cost on a person in the event that a magistrate may determine the person to be found guilty in a court of law of non-compliance against the provisions outlined in Table 7.

<u>Preferred approach</u> for maximum penalty amounts

Option 2 is the preferred approach to address the problem as it best reflects the environmental consequences of non-compliance with management provisions, with the maximum penalty amount establishing a clear upper limit of financial punishment proportionate to the offence. No other alternatives to addressing the problem described in 6.7.1 have been identified.

6.8 Other zoning plan amendments

As well as the changes described in previous sections a number of other amendments to the zoning plan are required to address various issues, such as:

- flow on effects to zoning plan provisions following changes proposed in previous sections
- complementarity with the zone entry and use provisions in other State marine park zoning plans
- unnecessary administrative and/or regulatory burden on marine park users and government
- unnecessary duplication of provisions across marine park legislation
- removal of obsolete provisions
- improved clarity.

By maintaining the existing zoning plan arrangements, various sections of the zoning plan would continue to create uncertainty for marine park users and in some cases unnecessary administrative burden on users and the Government. This 'no change' option is the base case against which the other options are assessed in this section, unless the changes are necessary due to flow on effects of changes proposed in previous sections.

Proposed changes to the current zoning provisions are discussed in sections 6.8.1 and 6.8.2. Section 6.8.1 outlines material changes that may have an impost on users whereas amendments outlined in section 6.8.2 are generally administrative in nature and will have little, if any, impact on the environment, business or the community. These administrative changes are included in this RIS, for information and completeness, as they do not require an analysis of costs and benefits.

6.8.1 Material amendments

This section describes amendments that are likely to have an impact on individuals, the community, government and/or the environment. Where feasible, alternative option/s are discussed and the preferred option identified. See Appendix 9 for proposed zoning plan provisions and Appendix 10 for a summary of proposed changes to the existing zoning plan.

6.8.1.1 Commercial collection of marine aquarium fish in the Little Woody Island MNP zone

The commercial Marine Aquarium Fish (MAF) fishery operates along the entire Queensland east coast targeting species such as damselfish, butterflyfish and angelfish. MAF fishers focus their collection on coral reef and inter-reef habitat and sell live specimens for display in private and public aquariums in Australia and overseas. It is a hand collection fishery whereby fishers target individual fish using apparatus such as fishing lines with single barbless hooks, cast nets, scoop nets and seine/barrier nets. Divers in the fishery use scuba or surface-supplied air from hookah (hose) apparatus.

Under the standard Marine National Park (MNP) zone provisions, collection in the MAF fishery is prohibited. However, the current zoning plan includes a non-conforming use provision to allow, with permission, collection in the MAF fishery to occur in the Little Woody Island MNP zone by a person who holds an active fisheries licence to operate in the fishery. There are currently approximately 40 fishers who hold an endorsement in the Queensland MAF fishery but it is unknown how many of these fishers operate in the Great Sandy Marine Park. The fishery within the marine park had a GVP of $44,737 in 2018/19 (BDO 2020 Coral and MAF Economic Report).

Issue

The current non-conforming use provision which allows the MAF fishery to occur at the Little Woody Island MNP zone does not limit the number of fishers that can access this area, hence over extraction from this highly protected zone of the marine park may compromise the integrity of the zone.

Option 1 – No change to zoning plan

This option would maintain the non-conforming use provisions for collection in the MAF fishery in the Little Woody Island MNP zone. There would be no change made to the zoning plan. This is the base case against which option 2 is assessed. No other options were identified to address the identified issue.

Option 2 – Amend non-conforming use provision for the commercial collection of marine aquarium fish in the Little Woody Island MNP zone

This is the preferred option that is reflected in the draft zoning plan

This option would amend the conditions of the current non-conforming use provisions to restrict access to the Little Woody Island MNP zone to commercial fishers that can demonstrate a history of collecting in the MAF fishery in this zone since 31 August 2006.

Potential benefits

- Assists in managing the risk of over extraction of marine aquarium fish from a highly protected zone, reducing the impacts on species abundance and diversity.

Potential costs

- Lost future opportunity and potential income for those fishers whose fisheries licence may allow them to access the area but are not able to demonstrate a past history of collecting in the Little Woody Island MNP zone.

Preferred approach to manage the MAF fishery at Little Woody Island MNP zone

Option 2 is the preferred approach to manage marine aquarium fish collection at the Little Woody Island MNP zone as it allows commercial fishers who can demonstrate use of the area since the marine park was established to continue to derive an income. Option 2 is also expected to limit the amount of extractive use that occurs in the highly protected zone with an anticipated potential reduction in extraction over time as fishers who are granted access, sell or relinquish licences. Improved species diversity and abundance in the MNP zone is expected in the longer term. A net benefit to Queensland is therefore expected.

6.8.1.2 Entry or use of the marine park without permission but after notification

The current zoning plan lists a range of activities that can occur without permission, but only after notification has been provided to the Chief Executive, prior to the activity commencing.

Issue

The zoning plan states that upon receiving notification of a listed activity, the chief executive may impose conditions on the entry or use. To determine whether any conditions should be applied to the proposed activity, consideration of potential impacts on the environment and users of the marine park is required. The zoning plan does not currently specify a timeframe for how far in advance notification should be given to the chief executive to allow this to occur.

In general, the activities listed present a low risk to the marine environment or other users of the marine park, however the conduct of maintenance dredging for navigational purposes (currently listed as an activity that can occur without permission, after notification) has the potential to impact on the environment and users of the marine park depending on the scale, duration and timing of the works. Maintenance dredging is usually undertaken by local or state government authorities to ensure that lawfully dredged channels, berths or construction works are maintained at previously authorised dimensions.

Time is required for an assessment of the notification of maintenance dredging works, prior to the activity commencing, to determine whether the chief executive should impose conditions on the activity. This timeframe should be prescribed in the zoning plan to provide clarity of requirements to proponents. Clarity is essential when, for example, proponents are engaging commercial contractors.

Option 1 – No change to zoning plan

This option would maintain the current process in relation to notifying the intention to undertake maintenance dredging. No change to the zoning plan would be made. This option would not address the problem and is the base case against which option 2 is assessed. No other options have been identified to address the issue.

Option 2 – Introduce new notification requirement for maintenance dredging for navigational purposes

This is the preferred option that is reflected in the draft zoning plan

This option would amend the zoning plan to introduce a requirement that notifications regarding maintenance dredging for navigational purposes must be provided to the chief executive at least 40 business days prior to the activity being undertaken.

Potential benefits

- This would allow sufficient time, commensurate with the environmental risk of the activity, for an assessment of the potential impacts of the activity proposed to be undertaken and conditions prescribed and conveyed to the proponent if necessary.

Potential costs

- Small administrative burden on proponents to ensure notification is provided within the stated timeframe for the activity.
- the notification period may create a small impost for a proponent in terms of project scheduling.

<u>Preferred approach</u> for managing maintenance dredging

Option 2 is the preferred approach to ensure that activities able to occur in the marine park without a permission (i.e., a permit), that have a risk of impacting the environment or marine park users, are undertaken following a sufficient notification period. Forty business days is expected to provide a reasonable amount of time for the Department of Environment and Science to assess the proposed dredging and apply any conditions to mitigate impacts, while minimising delays for the proponent. The proposed timeframe is consistent with provisions in the Moreton Bay Marine Park zoning plan regarding notifications for maintenance dredging for navigational purposes.

6.8.2 Administrative amendments

This section outlines zoning plan changes that are administrative in nature that will be made to:

- provide clarity/remove ambiguity to specific zoning plan provisions
- repeal redundant provisions
- reduce or remove administrative and/or regulatory costs on government and marine park users.

These changes are considered to have little, if any, impact on the environment, business or the community and are unlikely to result in an increase in the regulatory burden on, or costs to, the environment, government, business or the community. Many of the changes will assist in achieving consistent legislation, zoning arrangements and terminology for all Queensland marine parks which will provide an efficient approach to the management of Queensland's marine parks.

6.8.2.1 Publication of notices

Current zoning plan provisions

The Gazette is a publication of the Queensland Government that publishes legal notices such as commencement of new legislation, legislative changes and notices regarding subordinate legislation such as regulations, rules, notices and amendments to subordinate legislation and primary legislation.

The zoning plan currently refers to three types of notices that the chief executive is required to publish in the Gazette. These include:

- Transit lane notices for designated Go Slow Areas
- Grey Nurse Shark prohibited area notices
- Notices advising of the accreditation of Traditional Use of Marine Resource Agreements.

The current zoning plan does not prescribe any alternative means for publishing the above notices other than in the Gazette. Notices published in the Gazette reach a limited number of people and there is a cost of approximately $100 to government per notice published.

Zoning plan change

Remove the requirement for notifications for the above list of notices to be published in the gazette and replace with a requirement that these notices are to be published on the department's website or by other means that the chief executive deems appropriate (this may include the gazette).

6.8.2.2 Obsolete non-conforming use provisions

Current zoning plan provisions

Schedule 1 of the current zoning plan lists various activities that are inconsistent with the objects of the zone in which they are undertaken and are hence termed non-conforming uses. The schedule outlines the location/s where each activity can be undertaken, with permission, and any conditions that apply to the conduct of the activity. Three of the current non-conforming uses are no longer required:

- Conducting an aquaculture operation in a Conservation Park (CP) or Habitat Protection zone of the marine park. This activity is managed by the standard provisions of these zones.
- Conducting a developmental fishery (jellyfish fishery) in the CP zone located in the Great Sandy Strait. This fishery is no longer undertaken.

- Collecting in the commercial shell grit fishery in the CP zone located between Beelbi Creek and Torquay. The fisheries authority is no longer in force.

Zoning plan change
Remove the non-conforming use provisions for aquaculture, developmental fishery (jellyfish fishery) and the shell grit fishery.

6.8.2.3 Entry or use of the marine park without permission or notification

Current zoning plan provisions
The zoning plan lists a number of activities that can be undertaken in the marine park without permission or the need to notify the chief executive and it also lists activities that can be undertaken without permission but only once notification has been provided to the chief executive. These activities are related to emergencies, undertaking functions under various legislative Acts, maintaining navigational aids and navigation channels, defence activities and other similar functions.

Some activities that are currently listed as being able to occur without permission but after notification are essential to the core business of several government departments and are unlikely to adversely impact the marine park. The requirement to notify the chief executive before the activity is undertaken is unnecessary in which case it would be best placed in the section that prescribes the activities that can be undertaken without permission or notification.

Zoning plan change
Add the following to the list of activities that can be undertaken without permission or notification:
- to install, maintain or remove a sign for or about the *Fisheries Act 1994;*
- to undertake government geodetic, bathymetric or similar surveys;
- to construct, operate or service navigational aids, or their ancillary buildings or works, that are authorised under a law of the Commonwealth or the State, including the operation of vessels and aircraft for the purposes.

6.8.2.4 Designated Turtle Monitoring Area

Current zoning plan provisions
The zoning plan currently includes a Turtle Monitoring Area as a designated area type adjacent to Mon Repos on the Woongarra Coast. The objects for the Turtle Monitoring Area are listed as:
a) to protect turtles and their habitat; and
b) to monitor any effects on turtles from human activities, including trawling; and
c) to respond to risks to turtles.

No special management provisions are prescribed with regard to activities that can or cannot be undertaken in the Turtle Monitoring Area making the designated area type redundant and unnecessary. The objects of the designated area can be achieved by the standard zone provisions underlying the area which outline how research/ monitoring is conducted in the marine park. The current and draft zoning plan also contain other management provisions that assist in the protection of turtles and their habitat.

Zoning plan change
Remove the Turtle Monitoring Area as a type of designated area from the zoning plan.

6.8.2.5 Operation of a vessel in a particular area

Current zoning plan provisions
The entry or use provisions for all zone types makes provision for the operation of a vessel or aircraft in a particular area in the zone with and without permission. The original intent of these provisions was to restrict the amount of time a vessel or aircraft could remain anchored in a particular location within the marine park. However, the use of the word ‘operate’ is ambiguous and has created confusion amongst vessel owners, many of whom believe that the zoning plan places restrictions on how often they can use their vessel in the set time periods.

Zoning plan change
Amend the wording from “operate a vessel or aircraft” to “anchor a vessel in a particular area in the zone…” in all relevant sections of the zoning plan.

6.8.2.6 Detachment of commercial fishing dories

Current zoning plan provisions
Part 7 of the current zoning plan outlines restrictions applying to activities carried out in the marine park in addition to the zone entry and use provisions. The current restrictions in place for fishing or collecting state that a person must not detach more than one dory from a primary commercial fishing boat in a Conservation Park (CP) zone or Buffer zone and that in a Marine National Park (MNP) Zone, dories must not be detached unless the dory is responding to an emergency or being used to transport a person on a direct journey between the primary fishing boat and land. A dory is a tender boat that a person who holds a primary commercial fishing licence may use under a fisheries licence.

The current provisions mirror those prescribed in the Great Barrier Reef Marine Park Zoning Plan and are not relevant or necessary in the GSMP as much of the commercial fishing in the park occurs in relatively sheltered and shallow waterways which are suited to the use of smaller vessels, negating the need for the use of dories / tender vessels.

Zoning plan change
Remove the sections in the zoning plan regarding the detachment of dories from a primary commercial fishing boat in CP and MNP zones. The draft zoning plan does not include a Buffer zone.

6.8.2.7 Display of designated Grey Nurse Shark Area restrictions

Current zoning plan provisions
The special management provisions for the designated Grey Nurse Shark Area requires tourism operators and dive clubs to provide information about the restrictions of the designated area to divers entering the water, as well as displaying a sign stating the restrictions on dive boats and/or their place of business. These two provisions serve the same purpose and given the design of some dive boats, physically displaying signs can be difficult for operators.

Zoning plan change
Remove the requirement for tourism program operators and dive clubs to display a sign outlining the restrictions in place in a designated Grey Nurse Shark Area. The requirement to inform divers of the area restrictions before they enter the water will still apply.

6.8.2.8 Zoning plan definitions

Current zoning plan provisions
Schedule 3 of the current zoning plan provides definitions for terms used throughout the zoning plan, however some definitions are ambiguous leading to uncertainty of intent amongst marine park users and departmental staff.

Zoning plan change
Amend some existing, and insert new, definitions in the zoning plan. Appendix 10 lists the changes.

6.8.2.9 Management of activities at artificial reefs

Artificial reefs are structures placed in the marine environment to promote an increase in the abundance and diversity of marine species and can be used for diving and/or to provide alternative locations to natural reefs for fishing. These reefs attract and sustain a wide diversity of marine life by providing protection from predators, shelter from currents, breeding opportunities and a supply of rich food sources. They are popular sites for activities such as fishing and scuba diving and the department's experience with artificial reefs in Moreton Bay Marine Park has demonstrated that, on occasion, conflict between user groups can occur that requires management intervention. There are currently five artificial reef sites within GSMP.

Public interest in the establishment of artificial reefs to enhance fishing and diving opportunities is increasing. As part of the proposed zoning plan impact mitigation package, two new artificial reefs in GSMP will be installed to assist in the mitigation of impacts on recreational fishers from the proposed expansion of the Marine National Park zone network. In the future there may be a need for the Department to implement measures to address conflict (or reduce the risk of future conflict) between user groups at artificial reef sites in the marine park. There are currently no provisions in the zoning plan that prescribe how conflicting activities may be managed in the vicinity of artificial reefs, unlike the zoning plan for Moreton Bay Marine Park.

Zoning plan change
Prescribe a list of activities that can be prohibited by regulatory notice in or near artificial reefs in the marine park which would include:

(a) scuba diving;
(b) snorkelling;
(c) spearfishing;
(d) charter fishing;
(e) fishing for commercial purposes;
(f) fishing for recreation;
(g) anchoring;
(h) surface supplied air diving.

6.8.2.10 Commercial collection of coral adjacent to Woody Island

Current zoning plan provisions
Collection of coral by commercial and recreational fishers is prohibited in GSMP, except under a non-conforming use provision in the zoning plan which allows for coral collection in the Conservation Park (CP) zone to the north of Woody Island as a harvest fishery, only by the holders of two specific fisheries authority numbers (1484 or 1470). The Department of Agriculture and Fisheries has historically authorised the collection of coral under these two authority numbers in an area described as Coral Area 801. This area is approximately 0.82km^2 in size and intersects the current Marine National Park (MNP) zone and CP zone north of Woody Island (see Figure 9). Coral collected under the non-conforming use provisions from this site is currently minimal and supplies the Reef World Aquarium in Hervey Bay, a local tourist attraction in operation since 1979, and is not taken for commercial sale.

Figure 9. Location of Coral Area 801 in GSMP (left) and current zoning in vicinity of Coral Area 801 (right).

As described in section 6.1.1.3, part of the CP zone to the north of Woody Island is proposed to be converted to a MNP zone by expanding the current MNP zone in this area (see Appendix 4). Without an amendment to the current non-conforming use provisions, this change in the zoning would prohibit coral collection from the area where it is currently allowed to occur. A revised non-conforming use provision is required to allow this activity to continue.

Zoning plan change
Amend the non-conforming use provisions for the coral fishery to allow the activity to continue within the proposed MNP zone to supply the Reef World Aquarium, confining the collection of coral to the area within the current CP zone within Coral Area 801 defined by the following coordinates:

a) Northern tip of Woody Island (at or about 25°16.371'S, 152°56.573'E)
b) 25°16.239'S, 152°56.224'E
c) 25°16.099'S, 152°56.4'E
d) 25°16.012'S, 152°55.701'E
e) 25°15.669'S, 152°56.266'E

6.8.2.11 Conduct of media activities

Current zoning plan provisions
The entry or use provisions in the zoning plan prescribe the activities that can occur in each zone of the marine

park, with or without permission. If not listed as an activity that can occur with or without permission the activity is deemed to be prohibited in the marine park. Media activities, i.e., the recording of images or sounds, including, for example, by filming, photographing or sound recording often occur in GSMP. This can involve low impact activities such as taking still photographs for print media to large scale movie productions which can have impacts on the environment and users of the marine park.

The current zoning plan prescribes the zones in which a limited media activity (i.e., one that will have a negligible impact on the marine park) can occur without permission but it does not prescribe whether other types of media activities can occur i.e., those that are likely to have an impact on the natural, cultural and social values of the park. The omission of media activities (that are not considered to fit the definition of a limited media activity) from the list of activities that can be conducted in a zone with permission makes it a prohibited purpose for which the marine park can be used. This is not the intent of the zoning plan.

Zoning plan change
Amend the provisions for each zone in the marine park to include media activities, that are not a limited media activity, as an activity that can occur with permission. Conditions can be placed on marine park permits to mitigate any environmental risks or conflict with other marine park users that may arise through the conduct of larger scale media activities.

6.9 Marine park outer boundary

6.9.1 Issue

The Marine Parks (Declaration) Regulation 2006 describes the extent of the Great Sandy Marine Park, which in turn provides the basis for defining the boundaries of the various zones in the marine park. The Declaration Regulation currently references a statutory plan to define the extent of the marine park, rather than a written metes and bounds description used for Moreton Bay and the Great Barrier Reef Coast Marine Parks. This statutory plan is a low-resolution mapping product, largely based on a version of the coastline that showed navigable waterways rather than all tidal lands and waters. As such, the current plan, when compared with contemporary mapping and imagery does not incorporate the full extent and complexity of the tidal land and waters in various estuaries that were intended to be included within the marine park as per the original intent for declaration of the GSMP, in particular around the mouth of the Mary and Susan Rivers.

The statutory plan is inaccurate, illogical and difficult to interpret at the scale required to support use of the marine park, management and enforcement activities as many of the boundaries shown on the plan do not consistently align with easily identifiable and describable features. In addition to the difficulties created by its low resolution, the use of a fixed boundary drawn at a point in time does not accommodate the dynamic nature of the coast and waterways within parts of the marine park which are constantly being reshaped through erosion and accretion. This can compromise the intent of the marine park to conserve the marine environment up to the level of highest astronomical tide.

Marine park users and managers have consistently sought more accurate and easily accessible information on the marine park's boundaries and zones. Specifically with the advent of fishing and navigational "apps", affordable hand-held GPS systems and chart plotters, park users have sought digital maps of the marine park and its zones to facilitate compliance with the zoning plan, which are difficult to create using the current statutory plan boundary.

Since the declaration of the GSMP in 2006, a separate process has been undertaken by the Commonwealth and state governments to review the Australian territorial sea baseline which forms the basis for determining the jurisdictional boundary of Queensland Coastal Waters. This process confirmed that Queensland's Coastal Waters extend further offshore in some parts of the Wide Bay Region than had historically been mapped, especially in the vicinity of Sandy Cape. Queensland Coastal Waters extend three nautical miles offshore from the Australian territorial sea baseline, which is declared under the Commonwealth *Seas and Submerged Lands Act 1973,* and typically aligns with low water mark, but does not extend into rivers or bays. The effect of this change to the Australian territorial sea baseline on the GSMP is that, in the vicinity of Sandy Cape in particular, Queensland's Coastal Waters now extend further offshore than the current boundary of the marine park.

6.9.2 Proposed changes to the outer boundary

No alternatives have been identified, hence the following changes are proposed to the Declaration Regulation and Zoning Plan to address the issues described above:

1. Redefine the outer boundary of the marine park using a contemporary written 'metes and bounds' description. This will:
    a) Define the outer boundary in most locations as 'the location of highest astronomical tide' and will address inaccuracies of the current mapping product and accommodate the dynamic nature of the coastal environment.
    b) Extend the offshore outer boundary of the marine park to align with the revised extent of Queensland coastal waters. An expansion of the marine park boundary around Sandy Cape at the northern-eastern end of K'gari (Fraser Island) and along the eastern boundary south to Double Island Point will indicate the true extent of Queensland Coastal Waters in this area and reflect the intent of the original declaration of the marine park which was to include tidal land and tidal waters, to the offshore limit of Queensland State (i.e. Coastal) Waters, between Double Island Point and Baffle Creek. The amendment to the marine park's offshore outer boundary will add approximately 115km^2 to the total area of the marine park.

2. By redefining the outer boundary as described above, four small existing MNP zones will be removed from the marine park as they are located outside the revised marine park outer boundary or, as a result of the boundary redefinition, are ineffectively small in size and/or surrounded by a largely modified landscape. The four MNP zones, with their current identifier, and the reason/s for their removal are:
    - Gregory River (MNP05) - most of this MNP zone was originally mapped upstream of tidal limits above and including a weir and was also mapped into freehold land which is excluded from the marine park. The remaining area of the MNP zone is too small to retain (0.07km^2)
    - Cherwell River (MNP07) - most of this MNP zone includes, or is upstream of, a highly modified area associated with the railway corridor. The remaining area of the MNP zone is too small to retain (0.01km^2)
    - Burrum River (MNP08) – This MNP zone includes waters upstream of a weir. The remaining area of the MNP zone is too small to retain (0.1km^2)
    - Un-named mangrove island south-west of Turkey Island (MNP21) – this is a small and ineffective MNP zone. The loss of this MNP zone (1.44km^2) will be compensated by proposed enhancements to nearby proposed MNP22 (see Appendix 4).

Note, discussions regarding the inclusion/exclusion of the intertidal areas predominantly within the Great Sandy Strait, that are subject to exclusive native title rights determined under the Butchulla People Land and Sea Claim #2, and their level of protection, from the marine park, are currently underway with Butchulla Native Title Aboriginal Corporation (BNTAC). If these areas are excluded from the marine park, then Garry's Anchorage (MNP22), will also be removed as this MNP zone is subject to exclusive native title rights determined under the Butchulla People Land and Sea Claim #2.

Potential benefits

- A written 'metes and bounds' description that defines the outer boundary in most locations as the location of highest astronomical tide (HAT) will address inaccuracies of the current statutory plan and better accommodate the dynamic nature of coastal and estuarine environments. It enables the boundary to be described relative to natural features (for example, level of highest astronomical tide, waterway bank, front of mangroves) that move over time, for example in response to erosion, accretion and sea-level rise from climate change.
- The change brings the description of GSMP in line with the other two Queensland marine parks – the Moreton Bay and Great Barrier Reef Coast Marine Parks, promoting user understanding of the extent of each marine park.
- Users of the marine park are expected to find the 'metes and bounds' description logical, consistent and relatively simple to locate on the ground, supporting compliance with marine park management.
- The boundary will better align with other publicly available mapping layers such as aerial imagery and cadastral / property boundaries and will be more easily integrated with the boundaries of other planning instruments (e.g. local government planning schemes).
- The written boundary description will continue to align with:
    - a range of existing specific exclusions (e.g. Port of Bundaberg, freehold, national park and leasehold land) which are detailed in the Marine Parks (Declaration) Regulation 2006; and
    - the current upstream limit of the marine park in some of the larger waterways, and hence impose no regulatory impost in these areas.
- Public boat ramps will continue to be excluded from the marine park, which will maintain reduced regulatory impost for managing agencies undertaking repairs and maintenance on this infrastructure.
- Recognises and respects the native title rights and interests of the Butchulla people.
- Clear delineation of the outer boundary upon which zone boundaries can be aligned and described.

Potential costs

- The Marine Park has expanded in area by about 250km^2 (about 4%) which imposes a regulatory framework on a few areas not previously part of the marine park, most notably the offshore extent around Breaksea Spit and a narrow strip of water south to Double Island Point where the extent of Queensland Coastal Waters has been clarified and mapping updated. See Appendix 4 for the zones proposed to be applied to this area.
- The expanded area will impose a very minor increase in vessel fuel costs to government in enforcing applicable marine park regulations in these areas.

7 Overview of changes and impacts to existing fishing activities from the suite of preferred zoning change options

7.1 Background

This section of the RIS provides an overview of the changes to the existing commercial, recreational (including charter) and traditional fisheries conducted within the marine park that would result from implementation of the preferred zoning changes identified in section 6 and an overview of their predicted cumulative impacts and implications to each fishing sector. For the purpose of this, and subsequent, sections of the RIS, the revised zoning plan incorporating these preferred zoning changes will be referred to as the 'draft zoning plan'.

The marine park supports extensive recreational and commercial fisheries that are significant from social and economic perspectives to the Wide Bay Region; the cities, towns and villages that surround the park and to the many residents and visitors to the region that enjoy fishing for recreation and/or consuming fresh local seafood caught by the commercial fishing sector. The waters of the marine park also hold tremendous cultural significance as fishing grounds for the First Nations peoples of the region.

Queensland's fisheries are managed by the Department of Agriculture and Fisheries (DAF), which is implementing a significant program of fisheries management reforms under the *Queensland Sustainable Fisheries Strategy 2017-2027* to modernise the State's fisheries management.

While DAF is responsible for fisheries management, almost all fishing in State marine waters on the east coast of Queensland occurs within the three State marine parks. The integration of fishing and marine park management is relatively straightforward in many locations, however in some locations it can be challenging and highly contended, largely because some of the most prized and productive fishing grounds often hold significance from ecological, conservation and cultural perspectives.

Ultimately, an effective balance needs to be achieved that ensures that the marine environment and its associated ecosystems and cultural values remain healthy, productive, resilient, and well protected, and fishing along with other sustainably managed uses can continue within the marine park. As commercial and recreational fishing are the most widespread human uses of the Great Sandy Marine Park (GSMP), delivering this effective conservation/fishing balance is one of the more important challenges for this zoning plan review process.

7.2 Commercial fishing

Commercial fishing is the take of marine products for trade or commerce by licenced commercial fishers. The commercial fishing sector provides the community with the ability to purchase local, wild caught fish for consumption, bait and display.

A recent DAF-commissioned report (BDO 2020 Commercial Fishery Summary Economic Report), which summarises the economic and social indicators for Queensland's commercial fisheries, indicates that approximately 14,885 tonnes of seafood was caught by the State's 1096 commercial fishing businesses in 2018/19, with a gross value of production (GVP) (beach price) of approximately $239.6m.

Within the Wide Bay Burnett Region*, approximately 2,105 tonnes of seafood was caught during 2018/19 by the 325 commercial fishing businesses operating in this region, with a GVP of approximately $28.7m (i.e. approximately 12% of the State's total commercial fishery by value and 14% by weight).
**The Wide Bay Region extends from the northern side of the Noosa River to Baffle Creek and therefore aligns reasonably well with the northern and southern boundaries of the Great Sandy Marine Park but includes catch from beyond the seaward marine park boundary for some fisheries.*

The four major commercial fisheries conducted within the boundary of the marine park are trawl, net, line and pot fisheries, however there are also number of smaller harvest fisheries operating in the marine park that collect coral, marine aquarium fish, beach worms, bloodworms and yabbies. The effects of the proposed zoning plan changes for each of these fisheries are discussed below.

The following sections include estimates of the value (in terms of GVP) of catch that is predicted to be removed from each commercial fishery as a result of the proposed zoning and management changes reducing access to fishing grounds. These estimates are based on commercial fishery catch data from the period 2018-2020. The relatively coarse reporting scale of commercial catch data in relation to the scale of many of the proposed zoning and management changes has necessitated significant data interpretation. While these estimates have been developed in consultation with DAF and with the assistance of an independent fisheries consultant, it is recognised that these are estimates only. Further refinement of this analysis, through consultation with the commercial fishing sector to integrate their fine scale knowledge of the use patterns, would be required if the proposed zoning and management changes are to be progressed. Despite these limitations the DES is confident that the impact assessments presented in section 7 provide a sound indication of the quantum of the impact to each fishery that is likely to result from these proposed changes.

7.2.1 Trawl fishery

7.2.1.1 Background

The trawl fishery, which predominantly targets prawns, scallops, bugs and blue swimmer crabs, is the largest commercial fishery operating in the Wide Bay Burnett Region. In 2018/19, the trawl fishery in the region harvested 872 tonnes of seafood, with a GVP of $15.6m (BDO 2020 EC Trawl Economic Report).

These figures include significant catch from offshore waters beyond the marine park boundary.

Within the marine park, otter trawling (operating under the T1 and T2 fishery symbols) is by far the most significant form of trawling and is focussed within Hervey Bay and in the open offshore waters of the park. The highest trawl catch and effort in the marine park occurs in the northern half of Hervey Bay, near the offshore boundary of the marine park between Double Island Point and the top of K'gari and north of the mouth of the Burnett River. Much of the otter trawling within the park is undertaken by the trawler fleets based at Tin Can Bay, Urangan and Bundaberg, however the park is also utilised by trawlers from further afield, e.g. Mooloolaba.

A small river and inshore beam trawl fishery operating under the T6 (Burrum River and south) and T7 (north of the Burrum River) fishery symbols also occurs within the marine park. The areas that this fishery operates in are significantly limited, as the beam trawl vessels can only effectively operate within protected river and inshore environments and most areas of this type within the marine park are within zones under the existing zoning plan that prohibit trawling. Trawling is prohibited in all zones except General Use (GU) zones.

The current zoning plan includes a non-conforming use provision that allows for some beam trawling to be conducted within a section of the Conservation Park (CP) zone within the Mary River and within 1 km of the Mary River mouth. The use of this area is limited to two T6 licence holders that meet the criteria of the non-conforming use provision (Refer to section 6.1.3 for further details).

Trawling is regulated under fisheries legislation with an effort quota system being central to the management framework. Each trawler is permitted to work a certain number of days/nights based on the quota it holds. Through this system, a trawler can increase its allocation by buying quota from another vessel without the overall effort in the fishery increasing. There are also a range of other vessel size and gear restrictions, spatial and temporal closures and other management restrictions under fisheries legislation that apply to the trawl fleet that further contribute to the management of fishing effort and exclude trawling from specific locations. All trawlers are required to have a vessel tracking unit installed, and operators are required to submit report trip/catch notices, maintain catch and effort logbooks, report interactions with threatened species, and keep sales dockets for all product sold. Fisheries legislation also requires all otter trawl nets used in the east coast trawl fishery to have a recognised turtle exclusion device (TED) and a bycatch reduction device (BRD) installed, and all beam trawl nets to have a BRD installed.

7.2.1.2 Proposed changes interacting with the trawl fishery under the draft zoning plan

- Expansion of the network of Marine National Park (MNP) zones to improve habitat representation and threatened species protection (section 6.1.1.3)
- Conversion of GU zones to CP zones and Habitat Protection (HP) zones within Hervey Bay to buffer and connect MNP zones and protect habitat (section 6.1.1.3)
- Prohibition of beam trawling in the mouth of the Mary River to remove direct impacts on benthic habitats in the CP zone (section 6.1.3.3)
- Extension of the boundary of the existing Turtle Protection Area off Mon Repos further offshore to approximately 5km to enhance protection for nesting/inter-nesting turtles (section 6.3.3.4.3)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.1.3 Impacts and implications of proposed changes

The proposed expansion of the MNP zones and adjustment of some CP and HP zone boundaries as described in section 6.1.1.3 will result in the exclusion of trawling from some existing trawl grounds, particularly within Hervey Bay.

While the alignment of the proposed MNP zone boundaries has deliberately endeavoured to avoid productive trawl areas in the marine park (see Figure 10), this has been difficult to achieve at all locations, particularly within parts of Hervey Bay. Hervey Bay contains all the deep-water seagrass and a large proportion of the shallow-water seagrass that occurs within the park. Seagrass is one of the park's more vulnerable habitat types and its ecological values are broadly recognised, yet it is significantly underrepresented in the existing MNP zone network. To more effectively protect seagrass and meet the preferred habitat representation target of protecting at least 15% of the area of each vulnerable habitat type within the MNP zone network, substantial additional areas of seagrass have been incorporated within these zones. This has resulted in some areas of Hervey Bay that support a level of trawl effort being included in these proposed new and expanded MNP zones.

To buffer, connect and protect the integrity of these proposed new and expanded MNP zones, some additional areas of HP and CP zones are also included in the draft zoning plan around the perimeter of Hervey Bay. Some of these changes may also affect some existing trawl areas. The locations within the marine park where proposed zoning and designated area changes are expected to impact on the trawl fishing areas are presented in Figure 10. The draft zoning plan reduces the overall proportion of the marine park that is within GU zones (the only zone type within which trawling is allowed) from 74.1% to 60.8%. While this is an 18% reduction in the area of the marine park that is theoretically available for trawling, not all of the area that is proposed to be upgraded from GU zone is actively used for trawling, for a range of reasons (e.g. unsuitable depth, presence of rocks, reefs and hard ground, restrictions under fisheries legislations, unproductive for targeted trawl species).

The proposed removal of the current non-conforming use provision that allows two beam trawl licence holders to continue to operate within a section of the CP zone at the mouth of the Mary River (described in section 6.1.3.3) will remove beam trawling from this area immediately, rather than these licence holders being slowly transitioned from the area over time, under the existing non-conforming use provision. This will deliver an immediate conservation benefit to this section of the CP zone (which is a highly protected marine park zone) through eliminating the ongoing benthic habitat disturbance caused by this form of fishing.

Removing the non-conforming use provision as part of the current zoning plan review process will enable the affected licence holders to access the commercial fishers' impact mitigation package. Under the existing non-conforming use provisions, access to this area will ultimately be lost without any form of mitigation when the existing licence holders eventually sell or transfer their licence to another person.

Beam trawling in this area plays a role in the supply of small prawns, particularly for the bait market. Having a reliable local bait prawn supply can be valuable from a biosecurity perspective (e.g. the movement restrictions associated with the recent white spot virus outbreak in the Moreton Bay region prohibit uncooked bait prawns being sourced from there). This was a consideration in the decision to remove the non-conforming use provision however, bait prawns will still be able to be sourced from this area from the set pocket net fishery that will be allowed to continue (see section 6.2.4).

The current zoning plan includes a designated Turtle Protection Area that extends one nautical mile (1,852m) offshore from the Mon Repos to Burnett Heads shoreline, which prohibits trawling within its boundary between 1

November and 30 January. The purpose of this designated area is to protect turtles from interaction with trawlers as they access the internationally significant Mon Repos nesting site. The draft zoning plan (refer to section 6.3.3.4.3) proposes to extend the offshore boundary of this designated area an additional 3,148m further offshore to provide improved protection for inter-nesting turtles (i.e. turtles aggregating offshore in the active physiological process of egg production prior to coming ashore to nest). The extensive use of this larger area by inter-nesting turtles has been identified through turtle research and monitoring projects undertaken since the original designated area was implemented. While the mandatory use of TEDs in trawl nets minimises the trawling-related mortality risk for turtles in this area, being caught and expelled through a TED is a highly stressful event for turtles, particularly at this critical point in their breeding cycle. Turtle researchers have raised concern that stress of this type on breeding females has significant potential to impact on breeding success.

The area in the vicinity of Mon Repos supports a moderate level of trawling activity (Figure 10) so it is expected that this extension to the boundary of the designated area will result in some impacts to trawling between 1 November and 30 January.

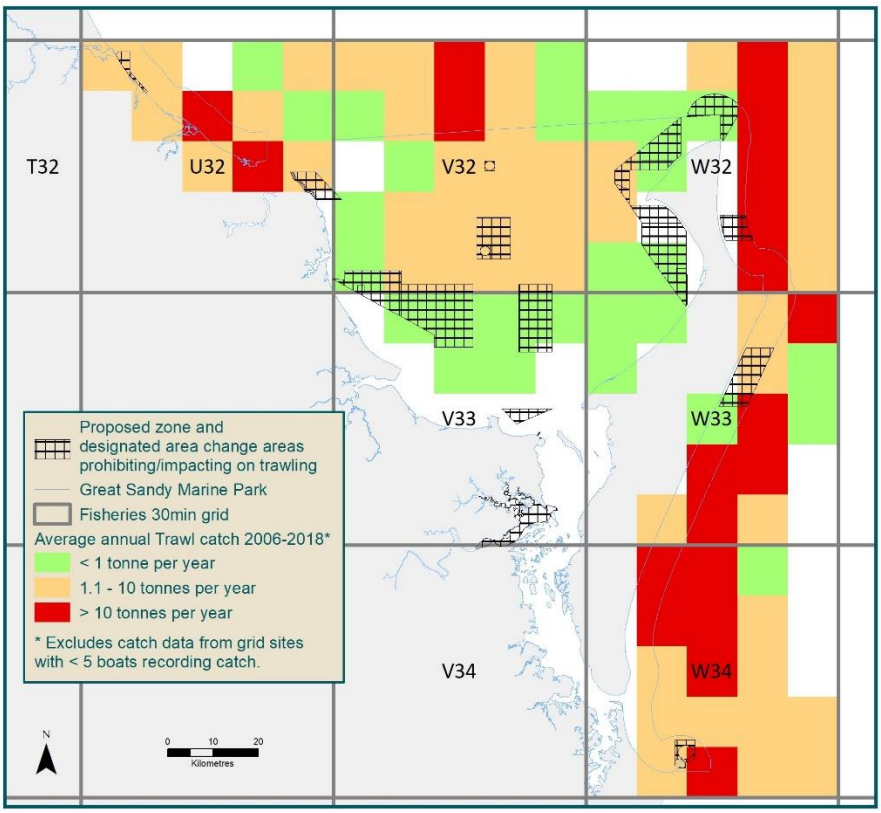


Figure 10. Proposed area of change impacting on trawl fisheries overlaid on trawl catch data - Great Sandy Marine Park.

Overall, the draft zoning plan will result in limited impacts to the trawl fishery within the marine park and within the broader region, however; some individual trawl fishers are expected to be more significantly impacted. In particular, the two beam trawl licence holders who are currently allowed to operate in the CP zone in and around the mouth of the Mary River will lose access to that area, and some of the otter trawl fleet that focus on trawling in the southern and eastern areas of Hervey Bay will be more significantly impacted by the expanded MNP zone network and other zoning changes in those areas.

Analysis of trawl catch data for the period 2018-2020 from the impacted areas of the marine park suggest that the proposed management and zoning changes will result in a reduction in trawl catch with a GVP of approximately $0.77m over a three year period (or approximately $256,000 of trawl catch per year). This equates to approximately 1.6% of the 2018/19 GVP of the trawl fishery in the Wide Bay Burnett Region.

It is expected that the proposed commercial fishery impact mitigation package would include an allocation of funding for mitigation for directly affected trawl fishers and funding for necessary structural adjustment (i.e. through the purchase of licences and symbols) to address potential trawl effort transfer issues.

The protection of significant additional areas of habitats such as seagrass within an expanded MNP zone network will remove trawling impacts and other significant human induced disturbance, which will support the resilience of these habitats to the impacts of natural events (such as floods, cyclones and climate change). Protecting these areas of undisturbed and resilient habitat throughout the park is anticipated to support fisheries productivity in adjacent trawl grounds through spill over, aid recovery following significant natural events and ultimately support the long-term sustainability of the trawl fishery within the marine park and broader region.

7.2.2 Net fisheries

7.2.2.1 Background

The net fishery is the second-largest commercial fishery (in terms of catch volume) operating in the Wide Bay Burnett Region and targets a range of fish and shark species using a variety of netting apparatus, including large mesh gill and ring nets, small mesh (bait) nets, beach seine nets and tunnel nets. Set pocket nets are also used by commercial net fishers in some specific locations (e.g. within the Mary River and Kolan River) to target prawns. From a fisheries management perspective the net fishery is part of the East Coast Inshore Fin Fish Fishery (ECIFF). This fishery also includes line fishing for inshore fish species. Across the ECIFF, the DAF Queensland Fisheries Summary Report for the 2018/19 financial year (DAF 2019 Queensland Fisheries Summary Report) indicates that approximately 88% of the reported catch (by weight) was from the net component of the fishery and 12% was from the line component.

In 2018/19 the ECIFF in the Wide Bay Burnett region caught 519 tonnes of fish, sharks and prawns, with a GVP of $3.8m (BDO 2020 ECIFFF Economic Report). Applying the fishery wide assumption that approximately 88% of this reported catch would be from the net component of the ECIFF, the 2018/19 GVP for the net fishery within the Wide Bay Burnett Region would be approximately $3.3m (noting that this assumes that a change in catch volume and catch value are roughly proportional).

Within the marine park, species such as barramundi and threadfin salmon are targeted with large mesh set gill nets (operating under fishery symbol N2) in the rivers and creeks. A wide range of fish species (including mullet, whiting, garfish, mackerel, bream and flathead) are targeted throughout the extensive inshore and nearshore waterways of the marine park using various configurations of large mesh gill nets and ring nets (operating under the N1 fishery symbol).

Ocean beach seine nets (K8 fishery symbol) are used within a defined area along the ocean beaches within Habitat Protection (HP) zones of the marine park, between Double Island Point and Sandy Cape. These nets are predominantly used to target sea mullet (>90% of the catch) during their annual spawning migration, but other species such as tailor, dart, bream and whiting are also caught.

Tunnel nets (N10 fishery symbol) are used to target species such as mullet, bream, garfish, whiting, flathead and trevally in specific areas, defined under fisheries legislation, within the Great Sandy Strait and Tin Can Inlet. These nets are essentially temporary fish traps and are set along mangrove-lined foreshore areas with fishers relying on the receding tide to funnel fish into the tunnel of the net. Under fisheries legislation only six N10 symbol holders are licenced to operate within GSMP.

Bait nets or small mesh nets (N11 fishery symbol) are used to target smaller, predominantly bait species, and along with set pocket netting, contribute a significantly lower proportion of the overall net catch within the marine park than the other netting methods. The N11 symbol is held by many commercial fishers who operate within the marine park. Fish caught with the bait (small mesh) nets can be sold for bait or human consumption, however the marine park management prohibits the take of bream, whiting and flathead with these nets to limit the targeting of these key table species. Fisheries legislation also prohibits the take of barramundi with bait (small mesh) nets.

The zoning plan prohibits all forms of commercial netting within Marine National Park (MNP) zones and Buffer zones. Within Conservation Park (CP) zones all forms of commercial netting, except for bait netting, are also prohibited. However, within the GSMP the designated Great Sandy Area that overlays the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (the Great Sandy Area waterways), allows all forms of commercial netting (compliant with fisheries legislation) to occur within its boundary.

Commercial netting is allowed within HP zones and General Use zones, provided it is undertaken in a manner that is compliant with fisheries legislation. Under fisheries legislation a number of key fish species targeted by the net fishery are subject to Total Allowable Commercial Catch (TACC) limits and quota-based management. A wide

range of gear restrictions (e.g. net type, length, drop, mesh sizes), spatial and temporal closures, species size limits and other restrictions also apply to the fishery. A requirement for net fishing vessels to have a vessel tracking unit installed was recently introduced. All operators are required to submit trip/catch notices for the catch of species with a TACC, maintain catch and effort logbooks, report interactions with threatened species, keep catch disposal records for TACC species and retain sales dockets for product sold.

A significant area of the marine park (Tin Can Inlet, Great Sandy Strait, Burrum River and the south-western portion of Hervey Bay) is within a dugong protection area (DPA). DPAs were introduced in 1998 under fisheries and nature conservation legislation over key dugong habitats along the Queensland coast, with the aim of reducing the risk of dugong interaction with commercial fishing nets in these locations. Within a DPA additional requirements apply to the types of fishing nets that can be used and require fishers to be in close attendance to their nets.

7.2.2.2 Proposed changes interacting with the net fishery under the draft zoning plan

- Prohibition of commercial netting with large mesh gill nets and ring nets (N1 and N2 fishery symbols) from the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (via removal of the designated Great Sandy Area) (section 6.2.4 and 6.3.3.2)
- Prohibition of commercial netting with large mesh gill nets and ring nets from the proposed HP zone in the Cherwell River and upper reaches of Burrum River (section 6.2.4)
- Introduction of a new non-conforming use provision that allows commercial tunnel netting to continue within the CP zone in the Great Sandy Strait and Tin Can Inlet following the removal of the designated Great Sandy Area (section 6.2.4)
- Introduction of a new non-conforming use provision that allows commercial set pocket netting to continue within the CP zone of the Mary River following the removal of the designated Great Sandy Area (section 6.2.4)
- Expansion of the network of MNP zones to improve habitat representation and threatened species protection (section 6.1 and 6.3)
- Expansion of the network of CP zones to minimise edge effects on MNP zones and to protect habitat (section 6.1.1.3)
- Amendment of the boundaries of CP zones at four locations to address the dynamic nature of estuary mouths (section 6.1.5)
- Expansion of existing and additional designated Go-Slow Areas to enhance protection of turtles and dugong from boat strike (section 6.3.3.5.2)
- Modification of the existing Sandy Cape Go Slow Area from seasonal to year-round to reflect use of the site by turtles and dugong (section 6.3.3.5)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.2.3 Impacts and implications proposed zoning changes

The net fishery within the marine park will be the most significantly impacted commercial fishery from the changes proposed in the draft zoning plan. The major driver of this impact is the proposal to prohibit the use of large mesh gill nets and ring nets from the CP zones of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, and from the proposed HP zone in the Cherwell River and upper reaches of Burrum River. The use of these nets in the CP zones within these waterways is currently allowed to occur under the provisions of the designated Great Sandy Area.

The Great Sandy Strait (including Tin Can Inlet and the mouth of the Mary River) is the most productive net fishing area within the marine park and the vast majority (approximately 90% or more) of fish commercially caught within the Strait are taken with large mesh gill nets and ring nets. These nets are also the primary net fishing apparatus used in Baffle Creek, Elliott River and Burrum River.

As detailed in sections 6.2.4 and 6.3.3.2, prohibiting the use of these nets within the CP zones of the Great Sandy Area waterways, and within the proposed HP zone in the Cherwell River and upper reaches of Burrum River, is the proposed solution to address:

- the ongoing conflict regarding net fishing arrangements in these waterways that is eroding community confidence in the marine park management
- the risks that large mesh gill nets and ring nets present to the threatened species within these waterways.

The development of this proposed solution has been guided by a set of principles, agreed by State Government agencies, that identify that the conflict management solution for these waterways should:

- enhance the region's recreational fishing lifestyle
- facilitate future regional economic growth based on nature-based tourism, recreational, charter and sportfishing
- reduce risks from commercial netting to threatened species
- incorporate initiatives that mitigate impacts to affected commercial fishers and avoid effort transfer.

These proposed changes to net fishing will not impact on the continuation of bait (small mesh) netting within the CP zones within the Great Sandy Area waterways, or in the proposed HP zone in the Cherwell River and upper reaches of the Burrum River; set pocket netting in the CP zone within the Mary River; or tunnel netting within the CP zone within the Great Sandy Strait and Tin Can Inlet. While these forms of net fishing are not without some risk to threatened species, those risks are lower than for large mesh gill nets and ring nets. The retention of these lower risk net fishing methods will allow for a limited level of commercial net fishing to continue to occur within these waterways and contribute to the supply of local seafood and bait for public purchase.

The prohibition on the use of large mesh gill nets and ring nets from the CP zones within these waterways will largely be implemented through the removal of the designated Great Sandy Area. By removing this designated area all forms of commercial netting, except for bait (small mesh) netting, would be automatically prohibited by the underlying CP zone standard provisions.

Within the Cherwell River and the upstream reaches of the Burrum River that are currently CP zone and within the designated Great Sandy Area, the zoning is proposed to be changed to HP zone to allow for improved management of ongoing coastal development issues in those waterways (refer to section 6.6.4). The standard provisions for a HP zone would normally allow for commercial netting to be conducted. However, to ensure net fishing effort does not transfer into this area following its prohibition from the remainder of the Great Sandy Area waterways, a new zoning plan provision will be implemented to specifically prohibit large mesh gill and ring netting from this new HP zone. Bait (small mesh) netting would be allowed in this HP zone.

Set pocket netting in the Mary River and tunnel netting in the Great Sandy Strait and Tin Can Inlet waterways will be allowed to continue in the CP zone in these locations, through new non-conforming use provisions. A marine park permit will not be required for set pocket net and tunnel net fishers to operate in accordance with these new provisions.

In addition to the prohibition on the use of large mesh gill nets and ring nets within the Great Sandy Area waterways, the commercial net fishing sector will also be impacted to varying degrees by the proposed expansion of the MNP zone network and some new and enlarged CP zones in various locations throughout the marine park (Figure 11 and Appendix 4).

The following new and extended MNP zones are likely to have the greatest interaction with more productive net fishing areas:

- MNP01 which includes the nearshore habitats south of the mouth of Baffle Creek
- MNP06 which includes a section of ocean beach north of Ngkala Rocks on K'gari
- the extension of the existing MNP14 which is proposed to include a section of nearshore habitat adjacent to Marsh Creek.

While minimising impacts to all commercial fisheries has been a key consideration in the placement of the proposed new and expanded MNP zones, ensuring that representative examples of all habitat types are comprehensively included within the MNP zone network and protecting key habitats for protected species has necessitated the inclusion of some of these more productive net fishing locations within the proposed network. The proposed modifications to the offshore boundaries of the existing CP zones within Coonarr Creek south of Elliott Heads, and Coongul, Awinya and Wathumba Creeks on the western side of K'gari are relatively minor changes in terms of the overall area of the marine park that would become unavailable to the net fishery. However, these changes may significantly impact on the existing and potential net catch from around the mouths of these creek systems. The current zoning plan protects each of these creeks within CP zones, however the continual movement of the creek mouths due to natural coastal processes has caused ongoing management uncertainty and compliance issues regarding the location of the CP zone boundary at the mouth of each creek. The proposed solution involves the extension of the CP zone boundary at each location offshore for a distance of approximately 500m from the creek mouth and a suitable distance to the north and south of the existing creek mouths to accommodate the longshore creek mouth movement. These boundary changes will ensure that the creek mouths and the coastal processes and ecological functions that occur there are entirely protected by the CP zone. This

solution will also support the conservation integrity of the CP zones within each creek by removing the ability for nets to be positioned directly in front of the creek mouths.

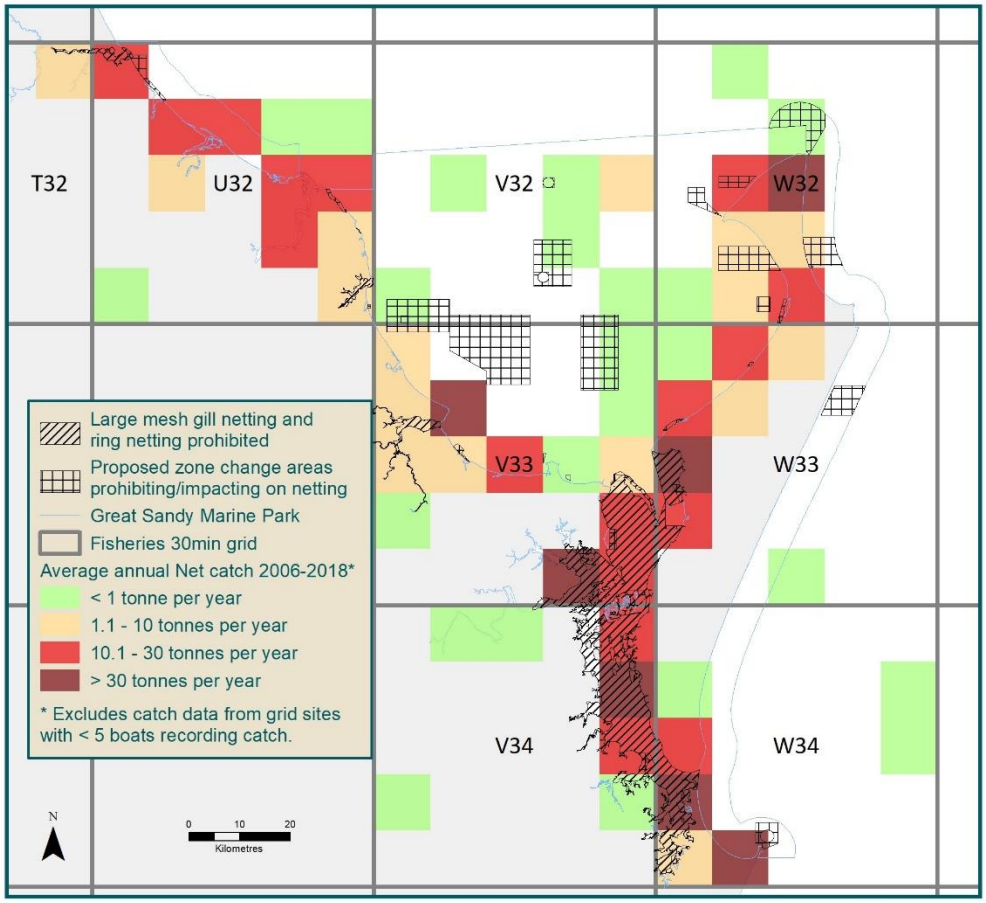


Figure 11. Proposed areas of change impacting/prohibiting on net fisheries overlaid on net catch data - Great Sandy Marine Park

A number of additional and extended Go-Slow Areas are proposed in the draft zoning plan to protect threatened species from interactions with fast moving vessels. Net fishers have historically raised concerns that Go-Slow Areas in key net fishing areas impact on their ability to efficiently and successfully set nets and locate schools of fish. While these concerns are recognised, Go-Slow Areas have proved to be an effective, balanced and essential management tool to protect species and other conservation values in areas of the park where fast-moving vessels present a particular risk (e.g. boat strike, shoreline erosion), while maintaining the ability for vessels to continue to access and operate in those areas.

Most of the proposed new and expanded Go-Slow Areas are located within the Great Sandy Strait. Given that the use of large mesh gill nets and ring nets is proposed to be prohibited within those waterways, net fishers are likely to have significantly less overall interaction with Go-Slow Areas in these waterways than currently occurs. For those netting methods that will be permitted to continue within the Great Sandy Strait and Tin Can Inlet, it is not expected that the additional Go-Slow Areas will result in negative impacts to tunnel or set pocket net fishing operations, as these netting methods do not utilise high speed vessel manoeuvring to set their nets. Bait (small mesh) netting operations in these waterways may be affected by the additional Go-Slow Areas, however the extent of bait netting that will continue in these waterways, and therefore any interaction issues, is difficult to predict at this time.

The proposed extension to the Go-Slow Area located south of the mouth of the Burrum River (GSA03) has the potential to result in additional interaction with netting operations in that area. This proposed extension is based on improved dugong monitoring data which identifies that the existing boundaries of this Go-Slow Area are not adequately protecting all areas of high dugong use in this location. This Go-Slow Area is particularly important given the high intensity of vessel movements through the mouth of the Burrum River.

The proposed conversion of the existing nearshore Go Slow Area between Sandy Cape and Rooney Point (GSA01) from applying on a seasonal basis (between 15 October and 30 April) to year-round may result in some

efficiency issues for the netting operations conducted in this productive net fishing area. Again, this change is proposed based on improved monitoring data that indicates that this area is being actively used by significant numbers of both dugong and turtles during most months of the year, hence the risk from boat strike is not being effectively addressed by the current seasonal go-slow provisions.

Overall, the draft zoning plan will result in major impacts to the net fishery within the marine park. The prohibition of large mesh gill nets and ring nets from Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet will be a primary driver of this impact, however some of the new and expanded MNP zones and CP zones will also contribute to this impact in particular locations.

The retention of bait (small mesh) netting in all CP zones, allowing tunnel netting and set pocket netting to continue, minimising the extent of impact of zoning changes to the ocean beach haul fishery and continuing to allow netting to continue in HP zones (except in the Cherwell River and upstream reaches of the Burrum River) and GU zones, will retain a level of commercial net fishing (albeit substantially reduced) within the marine park and some supply of fresh local fish from the park to the general public. However, the zoning changes that are proposed will substantially impact on the net fishing businesses that operate in the park, to the extent that some will become unviable. Impacts will also flow on to businesses that provide services that support the net fishery and the public will see reduced availability of fresh fish from these waterways for purchase.

Analysis of net catch data for the period 2018-2020 from the areas of the marine park affected by the proposed zoning plan changes suggest that these changes will result in a reduction in net catch with a GVP of approximately $6,345,000 over that three year period (or approximately $2,115,000 of net catch per year). This equates to approximately 64% of the 2018/19 GVP of the net fishery in the Wide Bay Burnett Region.

A commercial fishery impact mitigation package is proposed in recognition of this level of impact to the net fishing sector, which is expected to include a substantial allocation of funding for mitigation for directly affected net fishers, funding for necessary structural adjustment (i.e. through the purchase of licences and symbols) to address potential effort transfer issues and funding for quota purchase.

While there will be economic and social impacts from the proposed changes that affect the net fishery, these changes are expected to significantly reduce conflict regarding the management of the marine park, positively support the conservation of threatened species and enhance the region's recreational fishing lifestyle. The economic impacts of these changes are predicted to be offset over time by increased regional economic activity associated with tourism and an improved recreational fishery that will be generated by the reduced commercial net fishing effort within the park.

7.2.3 Pot fisheries

7.2.3.1 Background

The commercial pot fisheries within the Wide Bay Burnett Region are focused on three key species: mud crabs, blue swimmer crabs and spanner crabs. Within the region in 2018/19, 67 tonnes of mud crabs (GVP $2.1m) (BDO 2020 EC Mud Crab Economic Report), 68 tonnes of blue swimmer crabs (GVP $0.817m) (BDO 2020 Blue Swimmer Economic Report) and 501 tonnes of spanner crabs (GVP $3.0m) (BDO 2020 Spanner Crab Economic Report) were taken by commercial crab fishers.

Mud crabs and blue swimmer crabs (caught in pots under the C1 fishery symbol) are the key crab fisheries that occur within the Great Sandy Marine Park, with spanner crabs generally being taken from deeper waters outside the boundary of the marine park. Blue swimmer crabs are caught in both the pot and trawl fisheries in the marine park, with approximately 90% of the commercial catch taken with pots and 10% in the trawl fishery (this proportion is reflected in DAF's *Queensland blue swimmer crab fishery harvest strategy: 2021-2026* DAF 2021 Blue Swimmer Harvest Strategy).

The marine park is a significant mud and blue swimmer crab fishing ground from a statewide perspective. Along with Moreton Bay, Hervey Bay supports the most productive blue swimmer crab fishing grounds in the State and approximately 10% of the mud crabs taken commercially from Queensland east coast waters are from within the marine park.

Commercial pot fishers target mud crabs within the Great Sandy Strait, Tin Can Inlet and within mangrove lined rivers and creeks throughout the park, however the area in the general vicinity of the mouth of the Mary River is by

far the most productive mud crab fishery area. Blue swimmer crabs can be caught throughout the park, but the most productive potting grounds are within the mid and deeper water areas within Hervey Bay.

Commercial crab potting is prohibited within Marine National Park (MNP) zones and Buffer zones and is also effectively prohibited in Conservation Park (CP) zones because of the four-pot limit per person that applies within this zone. However, similar to the provisions of the designated Great Sandy Area in relation to commercial net fishing, the current zoning plan includes a non-conforming use provision that overrides the standard provisions of the CP zones of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet and allows commercial crabbers to use commercial quantities of crab pots in accordance with their fisheries licence/endorsements in the CP zones within those waterways. Commercial crab potting is allowed within Habitat Protection and General Use zones.

Under fisheries legislation, both blue swimmer and mud crabs are subject to Total Allowable Commercial Catch (TACC) limits and quota based management. Limits on the number of pots that can be used per fishery symbol, size limits, prohibition on the take of females and other restrictions also apply to the fishery. A requirement for crab fishing vessels to have a vessel tracking unit installed was recently introduced and operators are required to submit trip/catch notices for all catch of species with a TACC, maintain catch and effort logbooks, report interactions with threatened species keep catch disposal records for TACC species and retain sales dockets for product sold.

7.2.3.2 Proposed changes interacting with the crab fishery under the draft zoning plan

- Expansion of network of MNP zones to improve habitat representation and threatened species protection (section 6.1.1.3)
- Establishment of new and expansion of existing CP zones to minimise edge effects on MNP zones and provide additional habitat protection (section 6.1.1.3)
- Establishment of additional designated Go-Slow Areas and expansion of some existing Go-Slow Areas to enhance protection of turtles and dugong from boat strike (section 6.3.3.5.2)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.3.3 Impacts and implications of proposed zoning changes

As commercial crab potting is prohibited in MNP zones and effectively prohibited in CP zones, the proposed expansion of the MNP zone network and the creation of new and enlarged CP zones under the draft zoning plan have the greatest potential to impact on the commercial mud crab and blue swimmer crab pot fisheries within the marine park (Figure 12).

While major changes to the management of net fishing arrangements within the CP zones within the Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet are proposed to address stakeholder conflict issues in these waterways and the risks posed by large mesh gill nets and ring nets to threatened species, a similar conflict is not associated with crabbing in these waterways. As such, the draft zoning plan does not propose changes to the existing non-conforming use provision that allows commercial crab potting to be conducted within the CP zones in those waterways.

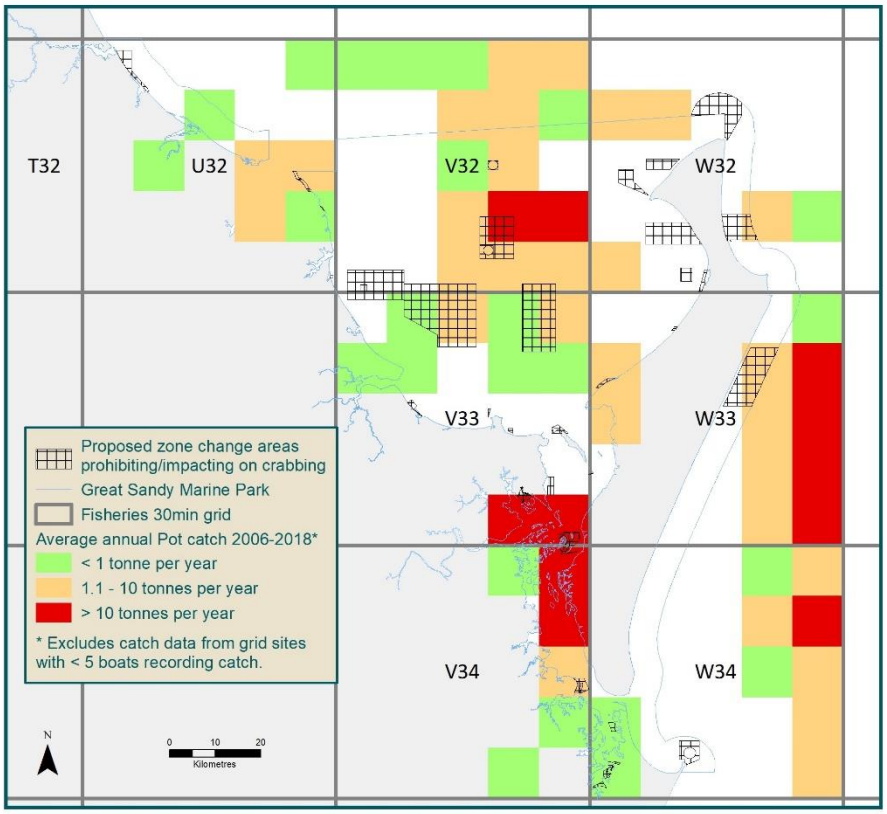


Figure 12. Proposed areas of change impacting/prohibiting on crab fisheries overlaid on pot catch data - Great Sandy Marine Park.

In general, proposed zoning plan changes are expected to have limited impact on key mud crab fishing grounds, however some localised impacts are expected to result from the following MNP zone proposals:

- A new MNP zone in the upstream reaches of the Susan River (MNP21).
- A new MNP zone on the northern side of the mouth of Kauri Creek at Cowra Point (MNP23).
- Modification and consolidation of the existing Turkey, Booker and Walsh MNP zones into MNP22.

The proposed Susan River MNP zone (MNP21) aims to protect a representative example of the intertidal habitats present in this upstream, intertidal area of the marine park. This proposed MNP zone includes areas of saltmarsh, which are listed as a threatened ecological community under the Commonwealth EPBC Act, and stands of cannonball mangroves, for which this area of the marine park represents the southern distribution limit for this species in Queensland. The proposed boundaries of this MNP zone have been aligned to exclude as many navigable waterways as practical to minimise impacts on the mud crab fishery, while still ensuring that the MNP zone will achieve its habitat representation and protection objectives.

The proposed new MNP zone located north of the mouth of Kauri Creek at Cowra Point (MNP23) is proposed to protect a representative example of the intertidal habitats within the lower section of the Great Sandy Strait. This location has been selected as it directly adjoins an area of terrestrial national park and provides an excellent example of the communities that occur across the intertidal profile in this section of the park. It also includes and protects an area of intertidal flats that is intensely utilised by dugongs and turtles. This area of the Great Sandy Strait is subject to a moderate level of mud crabbing effort, so given the habitat types that are included in the proposed MNP zone, it is likely that some loss of productive mud crab habitat from the fishery will result.

The area of the Great Sandy Strait in the vicinity of Turkey Island is a highly productive mud crab habitat that is heavily utilised by the commercial crab fishing sector. This area is located within the central section of the Great Sandy Strait, just to the south of its junction with the Mary River and in the general vicinity of the tidal interface of this double ended estuary, where tidal currents from the north and south meet and change their direction of flow. The confluence of these significant hydrological flows results in this area receiving regular inputs of nutrient rich waters and sediment. A large component of the sediment is retained in this area of the Strait and locally redistributed, creating a complex network of mangrove islands and shoals. This complex and nutrient-rich environment supports the area's extensive estuarine flora and fauna communities. Given its ecological significance,

it is essential that part of this area of the Great Sandy Strait is protected and effectively represented within the MNP zone network.

The current zoning plan has four MNP zones in this section of the Great Sandy Strait covering Turkey Island, Walsh Island, the intertidal area to the east of Booker Island and an unnamed mangrove island located southwest of Turkey Island. The location and boundaries of these existing MNP zones are shown in Figure 13. These existing MNP zones are disconnected and do not effectively incorporate a comprehensive example of the significant habitat mosaic within this area. Further, the alignment of their boundaries, in particular the Turkey Island MNP zone, is difficult to interpret which has created uncertainty for users of the area and ongoing compliance and enforcement issues.

The draft zoning plan proposes to modify the MNP zone configuration in this area to create a single, consolidated MNP zone that incorporates the eastern section of Turkey Island, the existing Walsh and Booker Island MNP zones and their interconnecting habitats (Figure 13). The boundary of this MNP zone (MNP22) is proposed to be clearly defined via coordinates to aid understanding and compliance. As part of this proposed MNP zone consolidation, the zoning of the western portion of Turkey Island and the MNP zone southwest of Turkey Island will be downgraded to CP zone, with commercial crabbing allowed to be conducted in those locations under the commercial crabbing non-conforming use provision. Minimising impact to the commercial crabbing sector has been a major consideration in the development of this proposed consolidated MNP zone, however these changes may result in a minor net loss of access to the crab fishery in the area.

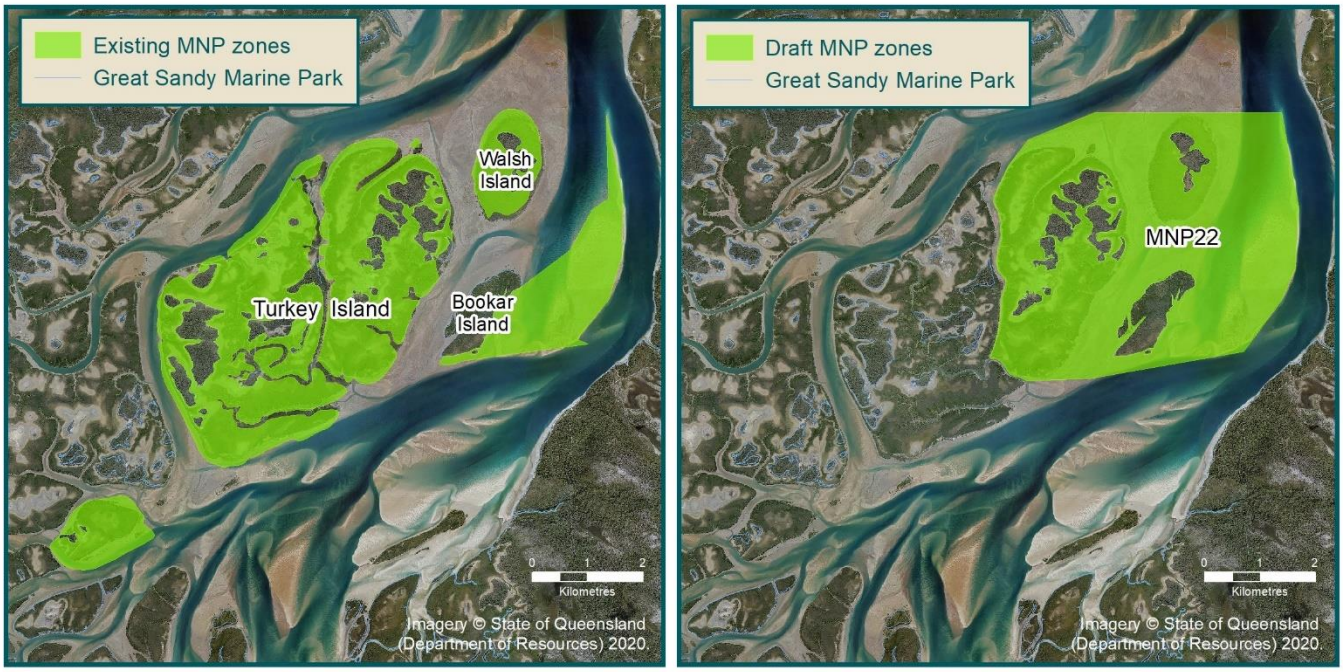


Figure 13. The current configuration of MNP zones in the general vicinity of Turkey Island (left side) and the proposed consolidated MNP zone (new MNP22) (right side).

The significant enlargement of the MNP zone network in Hervey Bay is expected to have moderate impacts on the blue swimmer crab pot fishery within the Bay due to the loss of some productive crabbing grounds.

The alignment of the proposed MNP zone boundaries in Hervey Bay has aimed to limit impacts on the most productive crabbing areas (and key areas for other fisheries), however this is challenging. Hervey Bay contains all the deep-water seagrass and a large proportion of the shallow water seagrass that occurs within the park. Seagrass is one of the park's vulnerable habitat types, yet it is significantly underrepresented in the existing MNP zone network. To more effectively protect seagrass and meet the habitat representation target of protecting at least 15% of the area of each vulnerable habitat type within the MNP zone network, substantial additional areas of seagrass have been incorporated within these proposed zones. The proposed extensions to the existing MNP zones in the southern and central parts of Hervey Bay (MNP10 and 11) and new MNP07 (Refer to Figure 12 and Appendix 4) are likely to cause the more significant impacts to the blue swimmer crab pot fishery.

Blue swimmer crabs are a relatively mobile species, so some of the crabs that are currently caught within the areas that are proposed to become MNP zones, may still be caught in other areas as they move through the marine park.

Figure 12 indicates that the proposed MNP zones adjacent to the ocean beach of K'gari may also interact with productive crabbing areas. The crab fishery in these offshore locations predominately targets spanner crabs, so it is likely that the vast majority of the catch that is identified in the underlying heat map based on the 30 nautical mile fisheries grids in Figure 12 as potentially interacting with these proposed MNP zones, is actually being caught in areas that are outside the boundary of the marine park.

A number of additional and extended Go Slow Areas are proposed in the draft zoning plan to protect threatened species from interactions with fast moving vessels. The location and need for these Go-Slow Areas have been identified through improved turtle and dugong monitoring data. Crab fishers who work within the Great Sandy Strait have historically raised concerns that the existing go-slow areas impact on their ability to efficiently move through their key crabbing areas to check and re-bait their pots. They highlight that limiting their ability to move quickly between pot locations is particularly problematic in areas with expansive intertidal flats that can only be accessed during a small part of the tidal cycle.

However, Go Slow Areas have proved to be an effective and balanced management tool that protect species and other conservation values in areas of the park where fast-moving vessels present a particular risk (e.g. boat strike, shoreline erosion), while maintaining the ability for vessels to continue to access and operate in those areas. Some of the new and expanded Go Slow Areas within the Great Sandy Strait overlap with productive mud crab fishing grounds, however they are generally small additions to the existing go-slow areas or are of a size and shape that are not expected to create a substantial additional impost to commercial crab fishers operating in these locations.

Overall, it is expected that the draft zoning plan will result in minor to moderate impacts on the commercial crab fishery within the marine park, however there will be some individual crab fishers who may be more significantly impacted. In particular, the blue swimmer crab fishers who operate in central Hervey Bay and potentially a small number of the mud crab fishers who operate in parts of the upstream section of the Susan River, in the vicinity of Turkey Island and near the mouth of Kauri Creek, may be more significantly impacted by some of the proposed MNP zones. Analysis of mud crab and blue swimmer crab catch data for the period 2018-2020 from the impacted areas of the marine park suggest that the draft zoning plan may result in:

- a reduction in mud crab catch with a GVP of approximately $950,000 over a three year period (or approximately $317,000 of mud crab catch per year) - this equates to approximately 15% of the 2018/19 GVP of the mud crab fishery in the Wide Bay Burnett Region
- a reduction in blue swimmer crab catch with a GVP of approximately $603,000 over a three year period (or approximately $201,000 of blue swimmer crab pot catch per year) - this equates to approximately 25% of the 2018/19 GVP of the blue swimmer crab pot fishery in the Wide Bay Burnett Region.

It is expected that the proposed commercial fishery impact mitigation package would include mitigation for directly affected crab pot fishers and funding for necessary structural adjustment (i.e. through the purchase of licences and symbols) to address potential effort transfer issues.

The predicted impacts to commercial crab catch from the proposed expansion to the MNP zone network may also be partially offset over time from spill-over of crabs from these additional protected areas. Research in Moreton Bay Marine Park following the implementation of additional MNP zones in key mud crab habitats in 2009 showed trends of increased abundance and size of crabs in some areas where all extractive activities had been removed by zoning changes. Mud crabs were also significantly more abundant in MNP zones that had been in place longer, highlighting the biodiversity benefits of MNP zones and that these benefits can take time to be realised. There was evidence of a spill-over effect of mud crabs into areas outside of MNP zones with some tagged mud crabs found between 1 and 24km from MNP zone boundaries. This spill-over may have occurred from older MNP zones and the length of closure of these areas to fishing was shown to be an important driver of mud crab size and abundance. These results indicate the positive spill-over benefits from the proposed additional MNP zones that can be anticipated in the GSMP into the future.

7.2.4 Line fisheries

7.2.4.1 Background

Commercial line fisheries in the Wide Bay Burnett Region target a range of demersal reef fish species (e.g. snapper, pearl perch, red emperor, coral trout) and pelagic species (e.g. mackerel, tuna). Line fishers in the region operate within the Rocky Reef Fin Fish Fishery, East Coast Spanish Mackerel Fishery, Coral Reef Fin Fish Fishery and the East Coast Inshore Fin Fish Fishery (ECIFF), depending on their licence requirements under fisheries legislation and on the species they target.

The overall GVP of the line fisheries in the Wide Bay Burnett Region for the 2018/19 financial year is estimated to be approximately $1.5m. This total GVP includes: Rocky Reef Fin Fish Fishery ($0.225m) (BDO 2020 Rocky Reef FF Economic Report), East Coast Spanish Mackerel Fishery ($0.287m)(BDO 2020 EC Spanish Mack Economic Report), Coral Reef Fin Fish Fishery ($0.495m) (BDO 2020 Coral Reef Fin Fish Economic Report) and the Line component of the ECIFF ($0.5m – assuming that line catch contributes approximately 14% of the total GVP for the ECIFF).

Within the marine park commercial line fishers target various species of mackerel within Hervey Bay and reef species over the various reef, coffee rock and ledge habitats scattered throughout the park. The commercial line fishery is the smallest of the major commercial fisheries conducted in the park.

Commercial line fishing is prohibited within Marine National Park (MNP) zones and is limited to only surface trolling in the Buffer zone located at Wolf Rock. Line fishing is allowed in Conservation Park (CP), Habitat Protection and General Use zones, however there are specific limits on the number of lines and hooks that can be used per person within the CP zones. The standard CP zone provisions within the marine park allows for the use of one rod / hand-held line and one hook per person, however within the designated Great Sandy Area, which applies to the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, three rods / hand-held lines and six hooks may be used per person.

Under fisheries legislation many species targeted in the line fishery are subject to Total Allowable Commercial Catch (TACC) limits and quota-based management. A range of spatial and temporal closures, species size limits and other restrictions also apply to the line fishery. A requirement for line fishing vessels to have a vessel tracking unit installed was recently introduced. Operators are required to submit report trip/catch notices for all catch of species with a TACC, maintain catch and effort logbooks, report interactions with threatened species, keep catch disposal records for TACC species and retain sales dockets for product sold.

7.2.4.2 Proposed zoning plan changes interacting with the line fishery under the draft zoning plan

- Expansion of network of MNP zones to improve habitat representation and threatened species protection (section 6.1.1.3)
- Establishment of three designated No Anchoring Areas to protect sensitive habitats from anchor damage (section 6.1.2)
- Modification of the limited line fishing definition in the provisions for CP zones to allow for the use of a maximum of two rods/hand-held lines and two hooks per person (section 6.2)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.4.3 Impacts and implications of proposed zoning changes

The expansion of the network of MNP zones is the key aspect of the draft zoning plan that will result in impacts to the commercial line fishery.

It is difficult to accurately assess the degree of impact that the proposed MNP zones will have on line fishing for pelagic species within Hervey Bay, as these species are highly mobile and move through the bay in schools during the summer months. Most of the line catch of pelagic species occurs in the eastern half of the Bay. There are many factors that influence where these schools of pelagic fish will move and where they will become ‘catchable’ (e.g. wind, currents, presence of bait schools). While the proposed expanded MNP zone network will prohibit fishing for schools of these species in some of the areas of Hervey Bay where they are currently caught, it is probable that there may be opportunities to target these same schools once they move beyond the boundary of the MNP zones.

The impact of new MNP zones on a reef fishing location is more certain, as the reef species that are targeted are strongly associated with the bottom structure (e.g. reef, coffee rock) in those locations. This association between the habitat and the targeted reef species means that when an area of reef/rock habitat is included in an MNP zone it can be assumed that the catch from that area will be removed from the fishery, at least in the short-term. In the longer term, the protection of reef habitats in MNP zones has been demonstrated (for species such as coral trout) to result in 'spill over'. Spill over results from the exclusion of fishing pressure in the MNP zone which, over time, supports the fish population to increase and the size, maturity and breeding success of individual fish to improve, such that individuals will eventually begin to spill out of the MNP zone to surrounding reef habitats, where they can become available to the fishery. Research conducted in the Keppel Islands region of the southern Great Barrier Reef found that the MNP zones there, which accounted for 28% of the reef area, produced about 50% of all juvenile coral trout that recruited to MNP zones and to fished reefs outside of the MNP zones, within a radius of 30km.

The expanded MNP zone network includes some additional areas of reef, coffee rock and other hard bottom habitats that are actively used by the line fishing sector. In particular, the proposed new and expanded MNP zones in the following locations are likely to impact on the line fishery for reef species:

- Ferguson Spit (MNP03)
- Hervey Bay Paleochannel (MNP07)
- Wolf Rock (MNP26).

Each of these MNP zones has been proposed and/or enlarged to ensure reef and other hard bottom habitats are adequately represented and protected in MNP zones. In the case of the Wolf Rock MNP zone the enlarged boundary is also proposed to improve the protection of the critically endangered grey nurse sharks that inhabit that area. Recent monitoring of grey nurse shark movement in the Wolf Rock area has shown that these sharks regularly move outside the boundary of the current MNP zone and Buffer zone in that location and that the area of the MNP zone needs to be enlarged to improve the level of protection for that species (refer to section 6.3.2)
The three proposed No Anchoring Areas (two near Point Vernon (NAA02 and NAA03) and one in Platypus Bay (NAA01) are intended to protect defined areas of susceptible habitat from anchor damage. The two No Anchoring Areas at Point Vernon aim to protect fringing reef habitats in a high use recreational fishing location directly adjacent to a residential area that is unlikely to be utilised by commercial line fishers. The proposed No Anchoring Area in Platypus Bay aims to protect an area of deep-water coral and sea whip habitat. Commercial line fishing occurs in this area of Platypus Bay so this No Anchoring Area may require commercial line fishers to adjust their fishing practices in this small area to exclude the use of an anchor, however it is expected that this requirement will have little, if any, impact on the line catch from this location.

The current zoning plan allows for the use of one rod /hand-held line and one hook per person within all CP zones, except those within the designated Great Sandy Area (i.e. Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet), where each line fisher may use three rods / hand-held lines and six hooks. As part of the proposal to remove the designated Great Sandy Area, the draft zoning plan adopts a 'middle ground' approach, whereby all line fishers (commercial and recreational) will be allowed to use two rods / hand-held lines and two hooks per person within all CP zones in the park. This approach is consistent with the provision of CP zones in Moreton Bay Marine Park. This change is unlikely to result in significant impacts or benefits to the commercial line fishery as most of the key commercial line fishing locations are not within CP zones and, in those areas where some line fishing currently occurs in the designated Great Sandy Area, it appears unlikely that the proposed limit of two rods / hand-held lines and two hooks per person will significantly impact on the current catch rates.

Overall, it is expected that the zoning plan changes proposed will result in moderate impacts to the commercial line fishery within the marine park. Analysis of line fishing data for the period 2018-2020 from the impacted areas of the marine park suggest that the proposed zoning plan changes may result in a reduction in line catch with a GVP of approximately $270,000 over a three year period (or approximately $90,000 of line fishing catch per year). This equates to approximately 6% of the 2018/19 GVP of the total line fishery in the Wide Bay Burnett Region. The proposed commercial fishery impact mitigation package is expected to include mitigation for directly affected line fishers and funding for necessary structural adjustment (i.e. through the purchase of licences and symbols) to address potential effort transfer issues.

7.2.5 Harvest fisheries

'Harvest fisheries' is a collective term for a group of commercial fisheries that generally involve the gathering of marine resources by hand, or with the use of hand-held apparatus. The harvest fisheries target a wide range of species such as coral, marine aquarium fish, yabbies, beachworms and bloodworms.

These fisheries tend to have a smaller number of participants than other commercial fisheries and the resources that they target are often not harvested for human consumption. A number of harvest fisheries are focused on bait species (e.g. beachworms, bloodworms and yabbies) to supply the recreational fishing sector and others supply the hobby industry (e.g. marine aquarium fish (MAF) and coral are sold for display in public or private aquaria).

In 2018-19 the combined GVP of the coral harvest and MAF fisheries in the Wide Bay-Burnett Region was $44,737 (this is <1% of the GVP of these fisheries from a statewide perspective BDO 2020 Coral and MAF Economic Report).

The GVP for 'other harvest fisheries' is reported as a combined value. The 2018-19 GVP for this category in the Wide Bay-Burnett Region (which includes the beachworm, bloodworm, yabby and adult and juvenile eel fisheries) was $841,890 (BDO 2020 Other Harvest Economic Report). This Regional GVP category is difficult to present as a proportion of the statewide GVP, as many of the fisheries included in this combined 'other harvest fisheries' category target entirely different marine resources in different regions of the State and therefore, it would not be a 'like-for like' comparison.

Under the Marine Parks Regulation 2017, 12 fisheries are listed as harvest fisheries that can be undertaken within State marine parks. All 12 of these harvest fisheries can be conducted with permission in General Use and Habitat Protection zones. Only the beachworm and marine aquarium fish (MAF) fisheries are allowed to operate in Conservation Park (CP) zones and must be undertaken in accordance with a marine park permission. Since the Great Sandy Marine Park (GSMP) was established in 2006, the following harvest fisheries have been, or are currently, undertaken within the park:

- Marine aquarium fish (A1 and A2 fishery symbols)
- Beachworm (W1 fishery symbol)
- Bloodworm (W2 fishery symbol)
- Yabby (Y fishery symbol)
- Shell grit (G fishery symbol)
- Coral (D fishery symbol).

In addition to these standard marine park management provisions, the current GSMP zoning plan includes three non-conforming use provisions that allow for MAF, coral and shell grit collection to also be conducted in some small, defined areas of the marine park that are within zone types that would normally prohibit these fisheries. The designated Great Sandy Area, that currently applies to the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, also modifies the standard CP zone management in these waterways to allow bloodworming and yabby harvesting to be conducted (and to be conducted without a marine park permission). These non-conforming-use and designated Great Sandy Area provisions were implemented to maintain access for these harvest fisheries to specific locations that were in use prior to the declaration of the marine park.

Under fisheries legislation, commercial fishers operating in the harvest fisheries must also hold a current authority to operate in the fishery, submit monthly catch returns to DAF and comply with any other requirements for the fishery as prescribed in fisheries legislation. As part of implementing actions under the Queensland Sustainable Fisheries Strategy 2017-2027, the Department of Agriculture and Fisheries (DAF) has recently prepared harvest strategies for the coral and MAF fisheries. These strategies detail a range of management actions necessary to achieve ecological, economic and/or social objectives for these fisheries.

7.2.5.1 Coral fishery

7.2.5.1.1 Background

The majority of the State's commercial coral fishery occurs within the Great Barrier Reef, however under fisheries legislation two small areas south of the Great Barrier Reef are also available for coral harvesting. One of these areas (referred to by DAF as Coral Area 801), is located within the GSMP. It is approximately 0.82km^2 in size and overlaps the current CP and MNP zones at the northern end of Woody Island (Figure 9).

Collection of coral by commercial and recreational fishers is generally prohibited in GSMP. The only exception to this, is an allowance under a non-conforming use provision in the current zoning plan, for the holders of two coral collecting licences (numbers 1484 or 1470) to collect coral within the part of the current CP zone that overlaps Coral Area 801. Further background and a map showing the location and extent of Coral area 801 are provided in section 6.8.2.10. Coral collected from this site is exclusively used for presentation in exhibits at the Reef World Aquarium in Hervey Bay and is not taken for commercial sale.

7.2.5.1.2 Proposed changes interacting with the coral fishery under the draft zoning plan

- Expansion of the MNP zone around the northern end of Woody Island (section 6.1.1.3)
- Amendment of the non-conforming use provision that allows coral collection at the northern end of Woody Island (section 6.8.2.10)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.5.1.3 Impacts and implications of proposed zoning changes

In recognition of the long history of use of this area for the collection of coral to supply the Reef World Aquarium, the educational benefits from the aquarium exhibiting local coral species and the limited extent of collection that is required to meet the aquarium's requirements, the draft zoning plan proposes that coral collection would be allowed to continue, as a non-conforming use in the part of the expanded MNP zone where coral harvest fishers can currently access.

This proposed outcome will maintain the continued low volume and infrequent collection of coral from this site under strict permit conditions, to support the operation of Reef World Aquarium, while the overall protection of the coral habitat within this site will be comprehensively and effectively protected by the expanded MNP zone.

7.2.5.2 Marine Aquarium Fish fishery

7.2.5.2.1 Background

The Marine Aquarium Fish (MAF) fishery operates along the entire Queensland east coast targeting species such as damselfish, butterflyfish and angelfish. MAF fishers focus their collection on coral reef and inter-reef habitat and sell live specimens for display in private and public aquaria in Australia and overseas.

It is a hand collection fishery whereby fishers target individual fish using apparatus such as fishing lines with single barbless hooks, cast nets, scoop nets and seine/barrier nets. Divers in the fishery use scuba or surface-supplied air from hookah (hose) apparatus.

Utilising practices that minimise injury or damage to the collected fish and that maintains them alive and in good condition throughout the collection, holding, transport and sale process are critical for the MAF fishery.

The MAF fishery sells most of its product to the international market, with 64% of aquarium fish caught in 2018/19 throughout Queensland being exported. While some species have a broad distribution, others are endemic to Queensland and nearby waters and attract high demand from export markets.

Under fisheries legislation the MAF fishery is a limited entry fishery managed largely through input controls such as limits on the number of vessels and collectors that can operate under a single licence, gear restrictions, species size limits and spatial and temporal closures for some species. MAF fishers are also required to submit catch and effort information via logbook returns.

Within the marine park, a marine park permission is required to conduct the MAF fishery in Conservation Park, Habitat Protection and General Use zones. The MAF fishery is prohibited in all Marine National Park (MNP) zones, with the exception of the Little Woody Island MNP zone. In this zone a non-conforming use provision allows for the collection of aquarium fish species, with permission, by a person who holds, or is acting under, an authority to carry out aquarium fish collecting under the *Fisheries Act 1994.*

7.2.5.2.2 Proposed changes interacting with the MAF fishery under the draft zoning plan

- New MNP zones proposed for Four Mile Reef and the reef at Pialba (section 6.1.1.3)
- Expansion of the MNP zone in the vicinity of Woody Island (section 6.1.1.3)
- Introduction of No Anchoring Areas at Point Vernon (section 6.1.2)
- Amendments to the conditions of the non-conforming use provision that provides for the fishery to operate in the current MNP zone adjoining Little Woody Island, to limit access to this site to only fishers who can demonstrate a history of collecting at this site since 31 August 2006 (section 6.8.1.2)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.5.2.3 Impacts and implications of proposed zoning changes

Data for 2018/19 for the combined coral harvest and marine aquarium fisheries in Queensland, indicate that for the two combined fisheries in the Wide Bay-Burnett reporting region 43 days of fishing occurred, generating a gross income of $44,737. As there is no commercial coral fishery in the marine park (refer section 7.2.5.1) it is assumed that this GVP would have been entirely generated from the MAF fishery. This equates to 6.4% of the State GVP for this fishery in 2018/19.

There are a number of reefs in the GSMP that have a history of use by fishers in the MAF fishery including Four Mile Reef, the reefs around Point Vernon and at Pialba, and reefs in the vicinity of Little Woody Island.

The proposed establishment of new MNP zones at Four Mile Reef (MNP12) and at Pialba (MNP17), will prohibit all forms of fishing within the boundaries of those zones and will reduce the area of reef habitat within the marine park that is available to the MAF fishery. The non-conforming use provision that allows the MAF fishery to be conducted within the MNP zone adjacent to Little Woody Island will continue largely unchanged, although access to this site will be limited to only MAF fishers who can demonstrate a history of collecting at this site since 31 August 2006.

The establishment of No Anchoring Areas over two reefs at Point Vernon may impact existing MAF collection practices at these sites and require fishers to modify their current work methods in order to comply with the no-anchoring requirements. However, it is expected that simple changes to work methods such as dropping divers off at the collection site and having the vessel ‘stand-off’ outside the No Anchoring Area or anchoring outside of the designated area and swimming into the reef, are likely to be feasible at these inshore reef sites, and therefore the overall impacts from these No Anchoring Areas to the fishery are expected to be minimal. The objective of these No Anchoring Areas is to protect these reefs from anchor damage and maintain their overall condition, which will in-turn support productive MAF communities.

Given that the 2018-19 combined GVP of the coral harvest and MAF fisheries in the Wide Bay-Burnett Region is reported to be $44,737 and the non-conforming use provision over MNP 18 (Little Woody Island) is being retained to support the MAF harvesting from this site, it would appear that any mitigation requirement is likely to be minimal. However, if justified, it is expected that the proposed commercial fishery impact mitigation package would recognise the potential for minor impacts to the MAF fishery and would factor in an allocation of funding for potential mitigation for directly affected fishers.

7.2.5.3 Beachworm fishery

7.2.5.3.1 Background

The State’s commercial beachworm fishery area consists of all foreshores along the east coast of Queensland. Beachworms, of the family Onuphidae, are the focus species of this fishery and are used as a prized bait for recreational fishers, particularly for targeting whiting.

Beachworms are hand collected (sometimes with the use of pliers) by fishers working in the intertidal surf zone along open ocean beaches. There are very limited physical impacts on the environment from this fishery and there are no by-catch issues associated with the collection of the species.

The Department of Agriculture and Fisheries (DAF) manages the fishery based on the following three management areas:

- Zone 1 - Foreshores between the NSW border and Inskip Point
- Zone 2 - Foreshores of Fraser Island
- Zone 3 - Foreshores between Inskip Point and Cape York excluding Fraser Island.

Beachworm fishers are limited to the fishery management area/s, stated on their fisheries authority. A harvest strategy for the beachworm fishery has not yet been developed by DAF.

In the Great Sandy Marine Park (GSMP) commercial beachworm harvesting can occur in all Conservation Park, Habitat Protection and General Use zones, providing a marine park permit for this purpose is also held by the fisher. The commercial harvest of beachworms is prohibited within Buffer and Marine National Park (MNP) zones.

Based on commercial fishery catch data for the years 2007 – 2017, on average, approximately 16 commercial fishing licences report beachworm catch from the GSMP each year, undertaking about 1300 fishing days and catching about 530,000 worms per year. This level of catch suggests that the beachworm fishery is likely to be contributing a significant proportion of the 2018-19, $841,890 GVP (BDO 2020 Other Harvest Economic Report) from the 'other harvest fisheries' (i.e. exclusive of the coral and MAF fisheries) conducted within the Wide Bay region.

7.2.5.3.2 Proposed changes interacting with the beachworm fishery under the draft zoning plan

- Establishment of a new MNP zone on the eastern beach of K'gari, north of Ngkala Rocks (MNP06) that will encompass the intertidal, surf zone and offshore habitats within this location (section 6.1.1.3)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.5.3.3 Impacts and implications of proposed zoning changes

The proposed MNP06 extends approximately 5.75km along the beach, reducing the area of ocean beach habitat currently available for the beachworm fishery along the east coast of K'gari (Fraser Island) between Sandy Cape and Hook Point by approximately 4%. The proposed MNP zone is in addition to the existing MNP zone at Middle Rocks which excludes all forms of fishing along a 1.5km section of beach. The combined shoreline length of these two MNP zones is just over 7km, resulting in approximately 5.25% of the eastern beaches of K'gari being unavailable to the beachworm fishery.

Given that almost 95% of the overall length of ocean beach along K'gari (i.e. 125km length of ocean beach) will remain open to beach worm collection, it is unlikely that this proposed MNP zone will result in any significant loss of productivity for the eight beachworm fishers licenced to collect from the K'gari foreshores. Further, as the proposed MNP06 is located at the remote, northern end of K'gari, a significant distance from the key vehicle access points to the island, it is probable that the current frequency of use of this area by commercial beach wormers is lower than for more accessible areas, further to the south.

7.2.5.4 Bloodworm fishery

7.2.5.4.1 Background

The State's commercial bloodworm fishery area includes all foreshores along the east coast of Queensland, however the fishery predominantly occurs within Moreton Bay and, to a lesser extent within the Great Sandy Marine Park (GSMP).

The fishery targets bloodworms of the family Eunicidae, within muddy seagrass habitats of estuaries. As bloodworms live in burrows extending up to 50 cm below the surface, the fishery requires substantial interaction with the seagrass and underlying substrate to extract the worms. Bloodworms are harvested by hand or by digging using a wide-pronged fork during low tide.

Bloodworms are sold live as bait to the recreational fishing sector where they are a sought-after bait for targeting whiting, dart, bream and flathead.

The habitat disturbance associated with the commercial bloodworm fishery is an ongoing issue of concern in relation to this fishery, with the rate of recovery of an area of seagrass following a worm digging operation being largely dependent on the skill and diligence of the commercial fisher in replacing the extracted seagrass sods. Under fisheries legislation it is a requirement that seagrass sods must be replaced at the end of each collecting activity otherwise penalties apply. Fisheries legislation also prohibits the use of digging implements (e.g. the use of worm digging forks) within declared FHAs due to the habitat disturbance that can be created with these implements. This prohibition on the use of digging implements effectively prohibits commercial (and recreational) bloodworm harvesting within all declared FHAs. Appendix 7 shows the location of declared FHAs within the marine park.

A harvest strategy for the bloodworm fishery has not yet been developed by the Department of Agriculture and Fisheries.

In the GSMP, the commercial harvesting of bloodworms can occur, with permission, in all Habitat Protection and General Use zones. It is also allowed within Conservation Park (CP) zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (without the requirement to hold a marine park permission) through the provisions of the designated Great Sandy Area but is prohibited from all other CP, Buffer and Marine National Park (MNP) zones within the marine park.

The allowance of bloodworming within the CP zones of the designated Great Sandy Area was implemented when the marine park was first declared in recognition that a limited amount of commercial bloodworming was likely to be occurring within parts of these waterways. However, with the prohibition on the use of digging implements within declared FHAs (that pre–date the declaration of the marine park), bloodworming has been effectively prohibited by declared FHA management in Baffle Creek, Elliott River, Burrum River and large sections of the Great Sandy Strait. Since the declaration of the marine park, catch records indicate minimal collection in the commercial bloodworm fishery within the marine park with that collection only occurring in the central parts of the Great Sandy Strait.

7.2.5.4.2 Proposed changes interacting with the bloodworm fishery under the draft zoning plan

- Prohibition of commercial bloodworming from the CP zones within Baffle Creek, Elliott River, Burrum River and Great Sandy Strait (via removal of the designated Great Sandy Area) (section 6.1.4)
- Expansion of MNP and CP zones (section 6.1.1.3)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.5.4.3 Impacts and implications of proposed zoning changes

The proposed zoning changes are expected to impact on a small number of fishers. Current available data indicate that there are fewer than five fishers operating in the bloodworm fishery in GSMP and their annual catch from the area is relatively low.

The existing management provisions for declared FHAs that cover large parts of the waterways that are currently part of the designated Great Sandy Area already significantly limit the areas in which the collection of bloodworms with a digging implement can occur.

Commercial bloodworm fishers that can demonstrate that they are directly affected by the proposed changes to the zoning plan will be eligible to seek mitigation for those impacts through the proposed commercial fisher impact mitigation package. Funding, through this package is also expected to be available for any necessary structural adjustment for the fishery (i.e. through the purchase of licences and symbols) to address potential effort transfer issues.

7.2.5.5 Yabby fishery

7.2.5.5.1 Background

The State's commercial yabby fishery area encompasses all foreshores of the Queensland east coast. The fishery targets marine yabbies (*Trypaea australiensis*), which are harvested from intertidal areas using handheld yabby pumps.

Under fisheries legislation the fishery area is divided into four management zones, with fishers only permitted to collect yabbies in the zone/s designated on their fisheries authority. The Great Sandy Marine Park (GSMP) is within the Sunshine / Fraser (zone C) management area. A harvest strategy for the yabby fishery has not yet been developed by the Department of Agriculture and Fisheries.

In the GSMP, commercial harvesting of yabbies can occur, with permission, in all Habitat Protection and General Use zones. The holders of (or those acting under) three fisheries authorities (numbers 3690, 1435 and 3464) are also allowed to harvest yabbies in the Conservation Park (CP) zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet. This allowance is provided by provisions of the designated Great Sandy Area that overlays the CP zones in these waterways. Commercial yabby harvesting is prohibited from all other CP, Buffer and MNP zones within the marine park.

When the marine park was first established, five commercial yabby authority holders were operating within the Great Sandy Strait and potentially at sites within Baffle Creek, Elliott River and Burrum River. Initially the designated Great Sandy Area provisions allowed for those five authority holders to operate in the designated area however, this number was reduced to the three currently listed when the zoning plan was remade in 2017 as two of the original authority numbers were no longer active. It is understood that authority number 3690 is no longer active.

7.2.5.5.2 Proposed changes interacting with the yabby fishery under the draft zoning plan

- Removal of the designated Great Sandy Area, including the provisions that allow for the harvest of yabbies in the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet by authority numbers 3690, 1435 and 3464 (section 6.2.4)
- Creation of a new non-conforming use provision that will allow the commercial yabby fishery to continue in the CP zone in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet without permission for those persons who hold fisheries authority number 1435 or 3464 (section 6.2.4)
- Expansion of MNP and CP zones over intertidal areas (section 6.1.1.3)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.2.5.5.3 Impacts and implications of proposed zoning changes

Impacts to the yabby fishery are expected to be negligible. The proposed areas of expansion of MNP and CP zones are generally not in areas of the marine park that would be expected to provide key yabby habitat and the replacement of the yabby fishery related provisions from the designated Great Sandy Area with a new non-conforming use provision, will largely ensure maintenance of the existing fishing rights of the holders of fisheries authority numbers 1435 or 3464.

7.2.6 Commercial fishery impact mitigation

As detailed in the preceding sections, the draft zoning plan proposes a range of changes that will displace and impact on the commercial fisheries undertaken within the marine park. Some fisheries will be more significantly impacted (e.g. the net fishery) but most are expected to experience some level of impact as a result of implementing the proposed conservation initiatives.

It is estimated that the draft zoning plan may reduce the current commercial catch across all fisheries within the marine park by a total of $3-3.5m (GVP) per year (noting that catch naturally varies from year to year) and impact 60-70 commercial fishing businesses to the extent that these businesses may choose to exit the commercial fishing industry. This impact has the potential to result in up to 110 (assessed as totaling 50 full time equivalent) jobs in the commercial fishing sector being directly affected. Depending on the structure of individual businesses, this job impact estimate, which will likely include job loss, is likely to include a significant number of owner operators.

To mitigate these impacts, the Government is committed to providing a fair and comprehensive commercial fishery impact mitigation package and in addition, will provide opportunities for affected workers in the commercial fishing sector to access business support opportunities and grants along with retraining and employment support. This will also be supported by a Regional Economic Enhancement package that is expected to create over 70 new jobs in the region.

The detailed structure of the commercial fishery impact mitigation package and retraining package will be finalised in consultation with industry following completion of consultation and feedback from affected industry participants

on the draft zoning plan, when final zoning changes have been refined and impacts can be more definitively assessed.

It is expected that the impact mitigation package would include:

- financial mitigation for eligible fishers (typically based on three years of lost catch as measured by up-to-date GVP estimates)
- buyback of fishing entitlements (primary licences and symbols) to address displacement of fishing effort and to provide an opportunity for affected fishers to exit the industry
- purchase of quota units for some species
- some support for eligible post-harvest seafood businesses to adapt to changed or reduced seafood supply.

7.3 Recreational fishing

7.3.1 Background

Recreational fishing is undertaken for recreation, sport and to provide seafood for personal consumption but not for trade or commerce. It is a popular and highly valued recreational pursuit in Queensland, with a recent statewide recreational fishing survey finding that 660,000 Queenslanders participated in recreational fishing over a 12-month period during 2019/20, undertaking 2.8 million days of fishing (2019/20 Rec Survey Outcomes). The Hervey Bay region is second only to the Brisbane Region in terms of the State's recreational fishing effort. Between April 2019 and April 2020 approximately 442,000 recreational fishing days were recorded in the Hervey Bay region (15% of the State's total).

Recreational fishers target a wide range of species that inhabit the diverse and high-quality habitats within the marine park. The Great Sandy Strait and the rivers and creeks throughout the park are fished from the shore and from vessels for species such as bream, whiting, flathead, grunter, mangrove jack, salmon and barramundi. Within Hervey Bay, schools of pelagic species such as mackerel and tuna are targeted during the warmer months. The inshore reefs, coffee rock outcrops, artificial reefs and ledges that fringe the bay and that are present in parts of the Great Sandy Strait are targeted for species such as grass sweetlip, cod, snapper, coral trout and fingermark. Some of these inshore reefs are also popular spearfishing locations. In the northern half of Hervey Bay and in the open waters east of K'gari there are deeper reef habitats where recreational fishers catch red emperor, coral trout, pearl perch, snapper and a wide range of other reef species.

The ocean beach of K'gari is nationally renowned for its winter tailor fishery and the ocean beaches between Double Island Point and Sandy Cape are fished year-round for species such as bream, whiting and dart. Parts of the Hervey Bay area are becoming internationally recognised sportfishing destinations. In particular, the extensive intertidal flats on the western side of K'gari draw specialist anglers targeting golden trevally, giant trevally and queenfish. Further to the north, in the vicinity of Rooney Point, a unique fishery targeting juvenile black marlin in shallow water habitats has developed.

In addition to fish, crabs and prawns are also a focus for recreational fishers within the marine park with mud crabs particularly targeted in the Great Sandy Strait, blue swimmer crabs targeted in inshore and offshore waters and prawns targeted with cast nets around the river mouths.

A number of artificial reefs have been constructed within the marine park, in accessible inshore locations, which make them very popular recreational fishing destinations.

An active inshore and offshore charter fishing sector operates within the park. Charter fishers are commercial businesses that provide a platform (usually a vessel), equipment and their specialised fishing knowledge to their recreational fishing clients. Clients on charter fishing trips must use recreational fishing apparatus and are subject to the same fishing related marine park management restrictions as any other recreational fisher using the park. The 2014 statewide recreational fishing survey indicated that almost 60% of the fishing effort within the area of the marine park (Fraser coastal waters) is shore-based (2013/14 Rec Survey Report). This survey also identified that trumpeter whiting, sand whiting, dart and tailor are the most harvested recreational species in the region.
The estimated annual recreational fishing expenditure in 2019/20 by Queenslanders who fish in Queensland delivered a Gross State Product of $333.7M to the Queensland economy through direct fishing trip expenditure (such as bait and tackle purchase) and flow-on activity (e.g. expenditure on boats and maintenance). This expenditure was assessed to support 3,136 full time equivalent jobs across the State (BDO 2021 Rec Fishing Economic Report).

Within the Wide Bay Burnett Region (which for the reporting purposes extends from the northern side of the Noosa

River to Baffle Creek and therefore aligns reasonably well with the northern and southern boundaries of the Great Sandy Marine Park (GSMP) but includes catch from beyond the seaward marine park boundary), the annual recreational fishing expenditure was estimated to deliver a Gross Regional Product valued at $35.2M (approximately 11% of the State's recreational fishing expenditure) and to support 359 full time equivalent jobs within the region.

In the GSMP, recreational line fishing is prohibited within Marine National Park (MNP) zones and limited to only surface trolling for pelagic species in the Buffer zone around Wolf Rock. Line fishing is allowed in Conservation Park (CP), Habitat Protection (HP) and General Use (GU) zones, however there are specific limits on the number of lines and hooks that can be used per person within the CP zones. The standard CP zone provisions allow for the use of one rod / hand-held line and one hook per person, except within the designated Great Sandy Area, that applies to the CP zones within the Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet, where three rods / hand-held lines and six hooks may be used per person.

Recreational crabbing, bait gathering and spear fishing, in accordance with fisheries legislation, may be conducted in CP, HP and GU zones. These activities are all prohibited in MNP and Buffer zones.

7.3.2 Proposed changes interacting with the recreational fishery under the draft zoning plan

- Expansion in the number and size of MNP zones throughout the park (section 6.1.1.3)
- Modification of the southern boundary of the Hoffman's Rocks MNP zone (MNP05) (section 6.1.1.3)
- Introduction of three No Anchoring Areas (section 6.1.2.3)
- Increase in the number and size of designated Go Slow Areas (sections 6.3.3.5.2 and 6.4.2.2)
- Introduction of no motorised vessel areas in Searys Creek and Cooloola Creek (section 6.4.3.2)
- Amendments to line fishing gear restrictions in CP zones (section 6.2)
- Prohibition of large mesh gill nets and ring nets from the CP zones within the Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (sections 6.2.4 and 6.3.3.2.4)

Refer to Appendix 4 for proposed zones, Appendix 6 for proposed designated areas, Appendix 9 for an outline of proposed zoning plan provisions and Appendix 10 for a summary of changes to the current zoning plan.

7.3.3 Impacts and implications of proposed zoning changes

7.3.3.1 Expansion of the Marine National Park zone network

The expansion of the network of MNP zones will be the key aspect of the draft zoning plan that will result in the most widespread impacts to recreational fishing and crabbing across the marine park. The current MNP zone network prohibits all forms of fishing, including recreational fishing, from 240km^2 (3.9%) of the park. The draft zoning plan proposes an expansion of this MNP zone network to protect an additional 550.7km^2 of the park within this highly protected zone type, taking the total percentage of the park within MNP zones to 12.8%. While this is a significant increase commensurate with the ecological values of the marine park, approximately 87.2% of the park will remain available for recreational fishing and crabbing.

As detailed in section 6.1.1, a comprehensive, adequate, representative and efficiently located MNP zone network is the foundation of marine park management. The MNP zone network of the draft zoning plan has been developed based on a range of habitat, species and use data and has been guided by a suite of bio-physical and socio-economic guiding principles, developed by an independent Scientific Reference Group (Appendix 2). These proposed MNP zones will protect representative examples of all 23 habitat types within the park (specifically more than 15% of the total area of all vulnerable habitat types and more than 10% of the total area of all other habitat types are incorporated within the proposed MNP zone network) and protect key habitats for threatened species while deliberately attempting to minimise impacts on existing users.

Due to the broad distribution of use of the marine park by recreational fishers and the lack of a geographic catch recording system for the recreational fishery, there is significant uncertainty associated with predicting the extent of impacts to recreational fishing that would result from these proposed new and expanded MNP zones in many areas of the park.

Based on the findings of the 2014 statewide recreational fishing survey that shore-based fishing contributes 60% of the recreational fishing in the Fraser Coastal Waters region, an assessment has been conducted to determine the extent of the marine park's shoreline that would be adjoined by MNP zones. The total length of shoreline within the

marine park (i.e. the length of mainland shoreline and the shoreline of K'gari within the marine park) is 1498km. Of this total shoreline length, 7.1% (106km) directly adjoins an MNP zone under the current zoning plan. This increases to 9.7% (146km) under the draft zoning plan.

Shore-based recreational fishing effort is not evenly distributed along the entire length of the marine park shoreline. Rather, most effort is likely to be focused near population centres (cities, towns, villages), around infrastructure (jetties, boat ramps, bridges) and along the ocean beaches of K'gari and the mainland that are readily accessible by 4WD vehicles. With the exception of the MNP zone that is proposed to extend over a part of the K'gari ocean beach north of Ngkala Rocks (MNP06), such locations are not generally compatible with the intent of an MNP zone and therefore have been largely avoided by the expanded MNP zone network in the draft zoning plan. In relation to the proposed MNP zone north of Ngkala Rocks, which has been proposed to ensure that a representative area of ocean beach habitat is included within the MNP zone network, this relatively remote location has been selected with the specific intent of minimising its impact on the recreational beach fishery on K'gari.

Given these factors, it is expected that the expanded MNP zone network will result in minimal additional impact to shore-based recreational fishing, which is the most widely conducted form of recreational fishing within the marine park.

From a vessel-based fishing perspective, the area of the marine park that is expected to be the most extensively affected by the new and expanded MNP zones, based on area of change, is the central section of Hervey Bay. Hervey Bay contains all of the deep-water seagrass and most of the shallow water seagrass that occurs within the park. Despite seagrass being one of the park's vulnerable habitat types and having a wide range of well documented, ecological values, it is significantly underrepresented in the existing MNP zone network. To more effectively protect this seagrass and meet the habitat representation target of protecting at least 15% of the area of vulnerable habitat types within MNP zones, the MNP zone network under the draft zoning plan incorporates substantial additional areas of seagrass, particularly within MNP07, MNP10 and MNP11.

These large MNP zones may impact on some areas that are currently used by vessel-based recreational fishers, particularly those who target pelagic species at certain times of the year and, in the case of MNP07, some deep-water holes and reef habitats north of the Twenty-Five Fathom Hole, where reef species are targeted. As pelagic species (such as mackerel) move through the bay in schools, it is probable that there will be opportunities to target these same schools prior to them entering, or after they exit, the boundary of these MNP zones, which may limit the overall impact to the recreational fishery for those species.

The new and expanded MNP zones that include reef habitats under the draft zoning plan are likely to result in greater impact to vessel-based recreational fishers, as the reef species that are targeted tend to be more strongly associated with the bottom structure (e.g. reef, coffee rock). This association means that when an area of reef/rock habitat is included in an MNP zone, the catch from that area will be largely lost to the fishery, at least in the short/medium-term. In the longer term, the protection of reef habitats in MNP zones has been demonstrated (for species such as coral trout, for example) to result in 'spill over', whereby the population and size of individual fish in the MNP zone increases due to the lack of fishing pressure and individuals may move out of the highly protected area to surrounding reef habitats, where they can become available to the fishery at those locations.

In addition to the reef habitats within the proposed Hervey Bay paleochannel MNP zone (MNP07), the expanded network of MNP zones under the draft zoning plan includes areas of reef, coffee rock, ledges and other hard bottom habitats in a variety of locations that are actively targeted by vessel-based recreational fishers. These MNP zones include:

- Ferguson Spit (MNP03)
- Four Mile Reef (MNP12)
- Woody Island (MNP16)
- Myers Creek (MNP25)
- Wolf Rock (MNP26).

While the impacts to recreational fishing from these MNP zones are acknowledged, each has been proposed and/or enlarged to ensure that these vulnerable and ecologically significant reef and hard bottom habitats are adequately represented and protected. The basis for each MNP zone is provided in Appendix 5.

The expansion of the Wolf Rock MNP zone (MNP26), under the draft zoning plan, has been specifically proposed to better protect the critically endangered grey nurse sharks that inhabit this area. Recent monitoring of the grey nurse shark movement in the Wolf Rock area has shown that these sharks are regularly ranging outside the boundary of the current MNP zone and its surrounding Buffer zone, where they are becoming susceptible to

capture by line fishers and injury from hook ingestion. While it is recognised that the waters in the general vicinity of Wolf Rock are heavily used by vessel-based recreational line fishers, this is the only known gestation site for pregnant female grey nurse sharks on the east coast of Australia with approximately half of the mature female sharks, that comprise the total east coast population of approximately 2000 individuals, being recorded at Wolf Rock (refer to section 6.3.2 for further discussion).

The draft zoning plan includes a number of other new, expanded, and in some cases reduced MNP zones (refer to section 6.1.1.3) that may result in localised impacts or benefits to recreational fishers. As such, fishers should review the MNP zone boundary locations (Appendix 4) and the basis for zoning (Appendix 5) to determine if these will have implications to their individual recreational fishing pursuits.

7.3.3.2 Modification of southern and western boundaries of Hoffman's Rocks MNP zone

The southern boundary of the existing Hoffman's Rocks MNP zone (MNP05) is proposed to be moved north by approximately 250m to remove a gutter and surrounding rocky outcrop from the MNP zone (Figure 14). The Woongarra Coast is a popular and accessible location for spear fishers, however available spear fishing sites are relatively constrained by the current extensive MNP zone network along this rocky coastline. This has been an ongoing source of complaints from the spearfishing community.

The gutter and adjacent rocky reef habitat identified within the red circle in Figure 14 is proposed to be removed from the existing MNP zone to allow this highly accessible nearshore area to become available for spear fishing and other forms of recreational fishing. To offset the relocation of this southern boundary and maintain the zone's overall area, its western boundary will be moved further inshore. This relocated inshore boundary will protect additional intertidal and near shore rocky reef habitat within the MNP zone and more clearly indicate that fishing in the area between the shore and the western boundary of the MNP zone is not supported.

Figure 14. Current zoning configuration of southern and western boundaries of Hoffman's Rocks MNP zone (left) and proposed MNP zone boundary locations (right).

7.3.3.3 Introduction of No Anchoring Areas

The three proposed No Anchoring Areas are intended to protect defined areas of susceptible benthic habitat from anchor damage. The No Anchoring Area in Platypus Bay (NAA01) will protect a remote, fragile deep-water coral and sea whip community while the two areas at Point Vernon (NAA02 and NAA03) will protect fringing reef habitats in this high use, nearshore location.

No Anchoring Areas provide a balanced marine park management solution to the problem of anchor damage, whereby they address the threat to the habitat while allowing fishing access to be retained.

Due to their location, it is expected that the Point Vernon No Anchoring Areas will have a significantly larger interaction with recreational fishers. However, recreational fishers will still be able to use and enjoy these areas provided they modify their existing fishing methods, where necessary, to eliminate the need for anchoring (e.g. drift

fishing or the use of electric motors to hold position).

7.3.3.4 Additional Go Slow Areas

A number of additional and extended Go Slow Areas are proposed in the draft zoning plan to protect threatened species from interactions with fast moving vessels and to protect natural and cultural values (refer to sections 6.3.3.5.2 and 6.4.2.2 and Appendix 6). The location and need for these Go Slow Areas has been identified through improved turtle and dugong monitoring data and, in relation to the Go Slow Area over Carland Creek in southern Tin Can Inlet that are proposed to protect cultural values, from engagement with First Nations peoples.

These additional Go Slow Areas will impact on the speed at which vessel-based recreational fishers can move around some areas of the park, particularly within parts of the Great Sandy Strait and Tin Can Inlet where the majority of these additional areas are located. However, like the existing Go Slow Areas, the proposed new areas do not overlap any marked navigation channels, so do not affect the primary maritime transit corridors through the park.

Go Slow Areas provide a valuable and balanced management tool that protects threatened species from boat strike and disturbance in key, shallow water areas and protects cultural values (e.g. middens) from boat wash impacts, while maintaining the ability for vessels to continue to access and operate in those areas.

It is proposed to retain and redefine the existing transit lanes at Poona and Kauri Creek, that extend cross the Go Slow Areas, to provide direct access corridors to the Poona Boat ramp and through Kauri Creek. Within these transit lanes, the Go Slow Area provisions do not apply. An additional transit lane is also proposed to be introduced across the expanded Go Slow Area at Tinnanbar. This transit lane will minimise impact on travel time for vessels launching from the Tinnanbar boat ramp and accessing the main navigation channel through the Great Sandy Strait.

7.3.3.5 No Motorised Vessel Areas in Searys Creek and Cooloola Creek

The proposed designated No Motorised Vessel Areas in Searys Creek and Cooloola Creek in southern Tin Can Inlet, in combination with the proposed extension of the existing MNP zones in these waterways, aim to enhance protection of the ecological values within these waterways and support the aspirations of First Nations peoples for better recognition and protection of the significant indigenous cultural values that exist within these areas.

The No Motorised Vessel Area provisions will prohibit the use of vessels propelled by petrol or diesel fuelled motors within these two waterways. The prohibition of these vessels aims to create a quiet and serene setting that respects the desire of First Nations peoples to connect with and use these culturally important areas and will also address issues associated with boat wash eroding sensitive cultural values that fringe the waterways.

Given that the boundaries of the No Motorised Vessel Areas directly align with the proposed expanded MNP zones, it will be these MNP zones, which prohibit all forms of fishing, that will be the factor that primarily will result in the impact in recreational fishing within these two waterways.

To minimise impacts to recreational fishing, the boundaries of the No Motorised Vessel Areas (and extended MNP zones) in Searys Creek and Cooloola Creek have been aligned to specifically exclude the following more popular fishing areas:

- the foreshore surrounding the Poverty Point Camping area on the southern side of Cooloola Creek
- the foreshore surrounding the powerline crossing, south of Searys Creek
- Searys ledge, north of Searys Creek.

7.3.3.6 Amended line fishing gear restrictions in CP zones

The current zoning plan allows line fishers to use one rod / hand-held line and one hook per person within all CP zones, except those within the designated Great Sandy Area (i.e. the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet), where three lines and six hooks may be used by each line fisher. As part of the proposal to remove the designated Great Sandy Area, the proposed revised zoning plan adopts a ‘middle ground’ approach, whereby all line fishers (recreational and commercial) will be allowed to use two rods / hand-held lines and two hooks per person within all CP zones in the park (refer to section 6.2). This approach is consistent with the rules that apply in CP zones in the Moreton Bay Marine Park.

This change is predicted to result in an overall beneficial outcome for recreational fishers. While the proposal will reduce the number of lines that are allowed to be used in some CP zones from three to two, in practice it is likely that most recreational fishers would rarely fish with three lines. Whereas allowing for the two lines to be used in CP

zones where currently only one may be used, is likely to be of material benefit to recreational line fishers, as it the use of two lines that is understood to be the most frequent practice for many fishers.

7.3.3.7 Removal of Designated Great Sandy Area and prohibiting large mesh gill nets from the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet

The draft zoning plan proposes to prohibit commercial net fishing with large mesh gill nets and ring nets (operating under N1 and N2 fishery symbols) from the CP zones of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet and from a HP zone (that is proposed to be created in the upstream reaches of the Burrum River and the Cherwell River). This proposal is discussed in detail in section 6.2.4.

The key outcomes from this proposal for recreational fishers are:

- significantly reduced competition for catch of fin fish within these waterways, as most (approximately 90% or more) of the commercial net fishing catch and associated fishing effort would be removed
- retention of the approximately 220,000 kg of fish (based on average commercial net catch data from 2018-2020) that is currently caught by commercial fishers using large mesh gill nets and ring nets in these four waterways each year within the ecosystem, which is expected to:
    - support the sustainability of fish stocks within these waterways and enhance the stocks of some fish species from a regional perspective
    - support a more natural functioning ecosystem within these waterways
    - improve recreational fishing opportunity
    - support increased recreational fishing based regional economic activity (e.g tourism, bait and tackle, vessel and equipment sales etc) which, over time, is expected to deliver regional economic benefits.

7.3.4 Recreational fishery impact mitigation

As detailed in the preceding sections, the draft zoning plan is proposing a range of changes that will displace recreational fishing in some areas of the park and significantly enhance recreational fishing opportunities in other areas.

It is expected that the removal of commercial netting with large mesh gill nets and ring nets from the CP zones within Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet will deliver a significant improvement to the recreational fishing opportunity within these waterways. On balance, and at a whole of park scale, it is considered that this outcome will mitigate any loss of recreational fishing access to other areas of the park resulting from the proposed expansion to the MNP zone network.

To support the region's recreational fishing lifestyle and promote future regional economic growth based on nature-based tourism, recreational, charter and sportfishing the Government has set aside $6M for the provision of additional/upgraded recreational boating infrastructure (e.g. public boat ramps) within the marine park and $2.5M for the construction of additional artificial reefs within the park.

The provision of alternative fishing locations, through the installation of artificial reefs is expected to provide new recreational fishing opportunities across the park. Depending on their location, these reefs provide additional habitat and recreational fishing opportunities to catch species such as trevally, Spanish mackerel, coral trout, estuary cod, mangrove jack and Jewfish. The installation of several artificial reefs in Moreton Bay Marine Park following its comprehensive zoning plan review in 2008 has successfully created popular recreational fishing locations. The reefs are constructed from purpose built structurally stable reef structures thus maximising productivity and longevity. By providing additional fishing opportunities, artificial reefs are expected to reduce crowding at existing fishing locations, thereby improving fishing experiences and reducing fishing pressure on natural reefs in the marine park. The economic benefits of artificial reefs have been recently demonstrated in NSW where a Social Return on Investment analysis in 2019 found that government investment in artificial reefs generates benefits such as increased recreational fishing activity, experiences and expenditure, attraction of new visitors and research activity and positive net returns for the State (e.g. $1.18 net benefit per construction dollar).

7.4 Traditional fishing

Traditional fishing is a significant cultural activity for First Nations peoples. There is a history of traditional fishing in the marine park, and a number of fish traps remain throughout intertidal and subtidal areas. Many of the techniques traditionally used to fish in the area have influenced contemporary commercial and recreational fishing techniques undertaken in the marine park today (e.g. tunnel netting, set pocket netting, spearfishing).

The Great Sandy Marine Park (GSMP) zoning plan recognises section 211 of the *Native Title Act 1993* (C'wealth) and does not affect native title rights and interests, including any activity such as fishing or traditional hunting, carried out in accordance with any native title rights or interests. As such, the traditional use of marine resources including fishing is allowed in all zones of the marine park, including Marine National Park zones.

The zoning plan includes provisions to accredit Traditional Use of Marine Resource Agreements (TUMRA). A TUMRA is a voluntary, community-led plan for management of the use of traditional resources which describes how Traditional Owner groups work in partnership with the Queensland government to manage traditional use activities on their sea country.

Each TUMRA has a committee to manage the agreement and traditional use of marine resources in relevant sea country, including traditional take, of species such as dugongs and turtles. This management of traditional use is usually based on both cultural lore and contemporary science.

There is currently one TUMRA accredited within part of the GSMP, being the Port Curtis Coral Coast Regional TUMRA, which was most recently re-accredited in April 2019 and will run for 10 years. This TUMRA applies to the sea country of the Port Curtis Coral Coast Traditional Owner groups (including the Gooreng Gooreng, Gurang, Byellee and Taribelang Bunda people) which extends to the north from Burrum Heads.

8 Summary and conclusion of draft zoning plan impact analysis

8.1 No change to the current zoning plan (the 'base case')

If the status quo were to remain and no changes were made to the existing Great Sandy Marine Park (GSMP) zoning plan, the boundary of the GSMP, the zoning, designated areas and a range of management provisions would remain unchanged. This outcome is not considered feasible given the high level of stakeholder and community interest in the natural and cultural values of GSMP and its use for a wide range of recreational and commercial activities. There are issues with the current zoning plan, as discussed in section 6, that require resolution, and a decision to make no change would not address the Government's obligation to have effective and efficient legislation in place or meet community expectations for a revised zoning plan. This outcome could also result in a loss of community support for future and other marine park zoning plan review processes, and confidence in departmental processes to deliver community expectations.

Detrimental outcomes and lost opportunities of not making changes to the GSMP zoning plan include:

- Marine park management arrangements would not meet globally accepted CARE principles or address SRG guiding principles, for the protection of marine habitats and biodiversity from a range of impacts, including climate change.
- No additional environmental or conservation benefits to the values of the marine park would be realised.
- Aspirations of First Nations peoples for their sea country would not be recognised.
- The recovery of threatened species populations may be undermined if proposals designed to improve their conservation are not pursued.
- Local government activities to address coastal climate change impacts would not be facilitated.
- Outer boundary issues would not be addressed, resulting in the continued reliance on inaccurate, illogical and difficult to interpret boundaries.
- Issues raised by stakeholders and the community would not be resolved.
- Anticipated economic benefits from improvements to, and increases in, recreational fishing activities and other nature-based tourism would not be realised.
- Conflict between user groups regarding the continuation of commercial netting in the designated Great Sandy Area would continue.
- Provisions creating an unnecessary administrative or regulatory impost would continue.

The benefits of retaining the status quo would be modest:

- Stakeholders already know the zoning plan rules (and would not need to learn and abide by new rules).
- Commercial fishers would experience no loss of fishing grounds and recreational fishers would maintain access to all current fishing locations.
- The financial impost to government would be negligible as:

- there would be no need to fund an impact mitigation package for commercial fishers as fishing activities would continue as per the existing management arrangements
- additional management resources such as signage, vessels, staff would not be required.

The use of enhanced community education was considered to address several problems, as an alternative to regulation. However, while awareness and education programs are useful, they cannot be relied upon solely to protect areas of high conservation and cultural values or threatened species. In the absence of regulation, it would be extremely difficult to denote locations where behavioural change is required to protect values and experience has shown that for some individuals, even when there is a risk of financial punishment they will not respond to education campaigns. Behaviour change campaigns require ongoing and resource intensive investment and despite this, changes in behaviour can be slow which would be detrimental to the marine environment, especially threatened species. A combination of education and regulation is required to ensure conservation objectives are achieved.

8.2 Amendments to zoning plan

The draft zoning plan incorporates each of the preferred options discussed in section 6 and is proposed to improve the conservation of the marine environment, protection of threatened species and overall management of the marine park. It is assumed the proposed changes to the zoning plan and accompanying impact mitigation strategies will provide a net overall benefit to Queensland by:

- expanding the Marine National Park (MNP) zone network to better protect important and vulnerable habitat types, supported by increases in the extent of Conservation Park (CP) and Habitat Protection (HP) zones to provide a comprehensive network of integrated zones throughout the marine park
- removing the designated Great Sandy Area, which enables commercial netting to be undertaken in the CP zone of Baffle Creek, Elliott River, Burrum River, Great Sandy Strait and Tin Can Inlet, while allowing some forms of commercial net fishing that pose a reduced risk to threatened species to continue in existing locations as non-conforming uses
- enhancing the protection for threatened species such as grey nurse shark, shorebirds, turtles and dugong by:
  - extending provisions that protect migratory shorebirds from intentional disturbance in the Great Sandy Strait to include the entire marine park, and introducing additional seasonal access restrictions at four significant high tide roost sites
  - expanding the existing network of Go Slow Areas for turtles and dugongs and amending the designated area special management provisions
  - upgrading the zoning adjacent to the Mon Repos loggerhead turtle nesting beach to CP zone, and expanding the size of the seasonal trawl closure area at Mon Repos to protect inter-nesting habitat for turtles
  - increasing the size of the MNP zone at Wolf Rock to reflect improved knowledge of how critically endangered grey nurse sharks use this only known gestation site on the east coast of Australia.
- establishing areas where remote natural values can be enjoyed, and cultural values are protected, by prohibiting motorised water sports (e.g. water skiing) or motorised vessels
- enabling essential, well-planned shoreline management works to address coastal erosion issues exacerbated by climate change, by downgrading small areas of CP zoning adjacent to some developed coastal areas
- aligning marine park zone boundaries and declared Fish Habitat Area boundaries to provide more consistent management across these marine protected areas
- updating the description of the outer boundary of the marine park from its current plan-based definition to a contemporary written boundary description to improve accuracy, understanding and management of the marine park
- fairly and comprehensively mitigating impacts for directly affected commercial fishers and undertaking necessary structural adjustment (i.e. through the purchase of fishing licences and symbols) to address potential effort transfer issues
- funding a program to install artificial reefs in the marine park to provide additional fishing opportunities and upgrade boating infrastructure (for example public boat ramps).

In balancing the advice of leading scientists, First Nations peoples, the community and industry, the draft zoning plan has taken a considered and balanced approach to MNP zone expansion, strengthened the presence of CP zones and Go Slow Areas, which together with other modest zoning changes have been designed to achieve the following outcomes:

- Better protection of a world class environment, featuring several iconic species – like whales, dolphin, dugong, turtles, grey nurse sharks and shorebirds – many at risk nationally and across the world, thereby protecting a draw card for visitation to the region.
- Better meeting the aspirations of First Nations peoples for the protection of cultural and natural values.
- Enhancing the region's enviable nature-based and recreational fishing lifestyle.
- Supporting future economic growth of the region based on nature-based tourism, recreational, charter and sport fishing, and potentially non-marine based aquaculture that would not risk local water quality outcomes.
- Largely maintaining use of the marine park by the commercial fishing sectors of trawl, crab, line and to a lesser extent net fishing.
- Enabling local government activities to address coastal impacts of climate change.

Table 8 provides a summary of the benefits and costs of the draft zoning plan across the environment, community, business/industry and government sectors.

Table 8. Overall impacts of the draft zoning plan compared to the "base case".

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
ENVIRONMENT		

Marine biodiversity	• Additional 8.9% area of the park protected in MNP zones, an increase from 3.9% to 12.8%, which is expected to result in:
	  ○ improved habitat connectivity
	  ○ increased species diversity and abundance
	  ○ increased resilience of habitat types to deal with impacts from climate change and disturbance events such as floods
	  ○ enhanced provision of valuable ecosystem services such as carbon sequestration, nutrient cycling and nursery areas for commercially and recreationally important fish species.
		Refer to cost for State government (DES)

Habitats	• All 23 identified habitat types occurring in the marine park protected from disturbance in MNP zone. • 16% of the total area of vulnerable habitat types and 10.6% of all other habitat types protected in MNP zones. • Protection of key shallow and deep subtidal seagrass that are critically important for the survival of turtles and dugong. • Establishment of three No Anchoring Areas to protect sensitive habitat types and/or species from potentially damaging activities. • Removal of habitat-disturbing commercial beam trawling and bloodworm fisheries from CP zones in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait, Tin Can Inlet and the lower reaches of the Mary River.	Refer to cost for State government (DES)

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
Threatened Species	• Reduction in potential entanglement of threatened species in large mesh nets by removing these nets from CP zones in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet (former designated Great Sandy Area waterways). • Contribution to the population recovery of several threatened species such as grey nurse shark, dugong, marine turtles and migratory shorebirds by minimising disturbance from impacting activities and protecting significant aggregation sites used for nesting, roosting and/or breeding. • Reduction in potential mortality and/or injury to turtles and dugong from vessel strike in key feeding, resting and transit locations.	Refer to cost for State government (DES)
National and International agreements	• Improved reflection of international commitments for biodiversity protection targets to achieve improved biodiversity outcomes. • Better supports the management of the Great Sandy Strait Ramsar site (Wetland of International Importance) and K'gari (Fraser Island) World Heritage Area. • Contributes to the population recovery of species subject to various International Conventions and Agreements to which Australia is a signatory. • Assists in the delivery of management actions identified in threatened species recovery plans.	Refer to cost for State government (DES).
COMMUNITY		
First Nations peoples	• Increase in cultural identity, health and well-being resulting from better protection of cultural values and resources and improved connection to Country. • Recognition of the priorities and perspectives of First Nations peoples in the management of the marine park. • Protection of cultural sites in the intertidal zone, e.g. shell middens, from use impacts. • Minimises impacts from visitation in culturally significant areas. • Potential increase in economic opportunities from improved protection of the marine park's natural and cultural values.	Requirement for vessel operators to drive "off the plane" in one location or to access two small estuaries by non-motorised vessel.

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
Recreational fishers	• "Spillover" of species (larvae, juveniles and adults) from MNP zones to surrounding areas will benefit fishers (depending on location and species) with a greater abundance of some target species. Spillover benefits that provide improvements in species' catchability over time may offset the loss of areas for recreational fishing. • Increase in maximum number of handheld lines or rods and hooks a fisher can use from one line and one hook to two lines and two hooks in CP zones that were not part of the designated Great Sandy Area. • Likely enhanced recreational fishing success through reduced competition for catch within the highly productive Great Sandy Area waterways with the removal of large commercial mesh nets. • Increased economic benefits for businesses that support the recreational fishing sector e.g. bait and tackle shops, chandleries. • Potential increased availability of target species that could increase fisher satisfaction, which is a major component in delivering secondary economic benefits. Improvement in fishers' satisfaction with their fishing activities could lead to improvements in their wellbeing. • Use of artificial reefs to provide additional fishing opportunities as part of a Regional Economic Enhancement Package. • Use of recreational boating infrastructure (new/upgrade of public boat ramps) as part of a Regional Economic Enhancement Package.	• The increase in the MNP zone network will remove an additional 8.9% area of the park available for fishing. Total proportion of the marine park in MNP zones will be 12.8% (791km^2). • Reduction of approximately 2.7% of coastline available for shore-based fishing. • Proposed new or expanded Go Slow Area may impact on recreational fishers' travel time and associated costs (fuel) per fishing trip. This could result in a decline in recreational fisher satisfaction with their fishing activities, with potential flow on effects to related businesses. • Modifications to fishing methods may be required (e.g. drift fishing or the use of electric motors to hold position) by fishers in designated No Anchoring Areas. • Reduction in the number of handlines or rods and hooks that can be used for line fishing in the CP zone of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet.
Vessel users	• Transit lanes incorporated in Go Slow Areas as necessary allowing vessels to access boat ramps without the need to travel off the plane or at speeds less than 6 knots. • Enhancement of recreational boating infrastructure (new/upgrade of public boat ramps) as part of a Regional Economic Enhancement Package.	• Proposed new or expanded Go Slow Areas could impact on vessel travel time and associated costs (fuel) per trip. • Vessel access and/or use restrictions in Platypus Bay, Carland Creek, Searys Creek and Cooloola Creek.

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan

General community	• Enhancement of amenity and natural values for park users with the introduction of:
	  ○ No motorised vessel areas
	  ○ Platypus Bay Area
	  ○ Go Slow Area for natural and cultural values.
	• Improved visitor and emergency services access to K'gari (Fraser Island) facilitated by zoning downgrade at Wanggoolba Creek.
	• Improved clarity of marine park management arrangements with inclusion of additional, or revised, definitions of key terms used in the zoning plan, and the removal of redundant and/or obsolete provisions.
	• Enhanced appreciation of the marine environment for persons visiting locations such as Platypus Bay and several creeks in Tin Can Inlet due to reduced noise disturbance and anti-social vessel nuisance behaviour.
	• Greater certainty for proponents about likely outcomes of development applications under different assessment processes and consistent messaging to the community about appropriate development in particular places.
		• Significant reduction (by an estimated 80% or more) of the availability of fish sourced from the Great Sandy Area waterways for purchase by the public (either directly from seafood retailers or via the hospitality sector).
		• Impacts to the culture and identity of some of the small villages and communities that surround the waterways that have a history that is strongly associated with commercial net fishing.
		• Reduction in purchasing choice for consumers of seafood products.
		• Impediments to access at seasonal shorebird protection areas especially in the small communities of Maaroom and Boonooroo and at some popular visitor locations such as Moon Point.
		• No pedestrian access to Mon Repos beach between 6pm and 6am for seven months of the year unless the person is part of a QPWS ranger-led tour.
		• Restrictions on vessel use and access by domestic animals at Mon Repos extended by an additional four weeks.
		• Increase in financial impact on persons should they be found guilty of committing a marine park offence by a magistrate.

BUSINESS / INDUSTRY		
Commercial fishers	• "Spillover" of species (larvae, juveniles and adults) from new and expanded MNP zones to surrounding areas will benefit fishers (depending on location and species) with a greater abundance of some target species available. Spillover benefits over time may partially offset the loss of areas for commercial fishing. • Access to an impact mitigation package for commercial fishers and the post-harvest sector.	• The draft zoning plan is estimated to reduce the current commercial catch across all fisheries within the marine park by a total of $3-3.5m (GVP) per year (noting that catch naturally varies from year to year). • Potential impacts on 60-70 commercial fishing businesses to the extent they may choose to exit the commercial fishing industry and may result in up to 110 (50 full time equivalent) jobs being lost in the commercial fishing sector, many of which owner operators. • Potential loss of primary economic contribution from commercial net fishing including direct revenue, jobs, and business profitability from the proposed removal of commercial large mesh netting in the designated Great Sandy Area and an increase in MNP zones. • Reduction in the commercial net catch taken in East Coast Inshore Fin Fish Fishery within the Wide Bay Region by

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
		approximately 64% (by value) (from the removal of the designated Great Sandy Area and other zone changes). • Potential loss of primary economic contributions from other commercial fisheries (pot, line, trawl, harvest) including direct revenue, jobs, and business profitability from an increase in MNP zones. • A reduction in the commercial blue swimmer crab catch in the Wide Bay Burnett Region of approximately 25% (by value). • A reduction in the commercial mud crab catch in the Wide Bay Burnett Region of approximately 15% (by value). Note that the decision to allow the mud crab fishery to continue in the CP Zones within the Great Sandy Area waterways is significant in minimising the impacts on this high value fishery. • A reduction in the line fishery catch in the Wide Bay Burnett Region of approximately 6% (by value). Note that this impact may be lower due to significant targeting of pelagic species in Hervey Bay that may be able to be caught outside of MNP zones. • Impacts on trawling are generally considered to be low due to the careful positioning of MNP zone boundaries within Hervey Bay. • Removal of commercial beam trawling and bloodworm fisheries as a non-conforming use from CP zones in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet. • Potential new or expanded Go Slow Areas could negatively impact some commercial fishing activities as vessels are required to travel off the plane and at a speed of less than 6 knots. For example, crab fishers have limited time on the high tide to access potting areas in shallow locations. • Modifications to fishing methods may be required (e.g. drift fishing or the use of electric motors to hold position) by fishers in designated No Anchoring Areas. • Potential loss of identity and psychological impacts, particularly for generational fishers who are unable to fish and may need to leave the area to find alternative employment. • Reduction in the number of MAF fishers who can access the Little Woody Island MNP zone.

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
Ancillary commercial fishing businesses	• Access to an impact mitigation package for commercial fishers and the post-harvest seafood processors and wholesalers impacted by proposed zoning plan changes.	• Reduction in seafood supply to local post-harvest seafood businesses requiring adaptation or downsizing of their operations. • Potential loss of jobs in the post-harvest commercial fishing sector such as seafood processing, fish markets, seafood shops and flow on industries, e.g. refrigeration, mechanical and welding services. • Reduction in business activity for local support industries such as net makers, chandleries, transport companies, refrigeration, marine mechanics and engineers/fabricators.
Charter fishing	• Proposed removal of designated Great Sandy Area/commercial netting may create new economic opportunities for charter fishing and associated tourism. • Increase in maximum number of handheld lines or rods and hooks a fisher can use in all CP zones from one line and one hook to two lines and two hooks.	• Expansion of MNP zone network could impact on charter fishing operations if their specific fishing sites are no longer accessible. • Potential new or expanded Go Slow Areas could impact some charter fishing activities in time taken/fuel usage to travel to fishing sites. • Reduction in the number of handlines or rods and hooks that can be used for line fishing in the CP zone of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet.
Hospitality industry	• Long-term benefits from increases in nature-based and recreational fishing tourism for accommodation providers, restaurants and other food outlets.	• Potential decrease in availability of fresh commercially caught local seafood and reduction in purchasing choice for consumers.
Tourism	• Enhancement of the natural values of the marine park that are prized by the community and regarded as a natural and commercial asset, thus providing a strong basis for nature-based tourism (e.g. snorkelling, diving, kayaking, wildlife viewing). • Expected increase in tourism as a result of improved recreational fishing opportunities and amenity from the proposed removal of the designated Great Sandy Area and increase in the MNP zone network. • Enhanced enjoyment of Mon Repos beach for visitors on turtle tours through management of public access. • Promotion of nature-based recreation and tourism. • Improved visitor and emergency services access to K'gari (Fraser Island) provided for by zoning downgrade at Wanggoolba Creek.	• Potential loss of tourism associated with fresh local-caught seafood from fishing towns/wharves/ports/fish wholesalers, retailers and co-ops and community events such as the annual Hervey Bay Seafood Festival.

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
Wide-Bay regional economy	• Facilitates potential expansion and development of aquaculture operations within, and adjacent to, the marine park. • Potential for the creation of new small businesses that support the local economy e.g. charter fishing, nature based tourism. • Potential increase in recreational fishing tourism and associated business i.e. bait and tackle shops, fuel and accommodation providers, restaurants and cafes etc. • Greater certainty for proponents about likely outcomes of development applications under different assessment processes and consistent messaging to business community about appropriate development in particular places.	• Potential loss of regional economic benefits associated with loss of product for export and interstate markets. • Potential loss of tourism associated with fresh local-caught seafood from fishing towns/wharves/ports, fish wholesalers, retailers and co-ops.
GOVERNMENT		

Local government	• Changes to zoning will:
	  ○ facilitate works to protect sensitive foreshore areas, community assets and undertake beach nourishment in certain locations
	  ○ facilitate maintenance of beach access tracks that enhance access for residents and visitors.
	• Assist local governments to implement Coastal Hazard Adaptation Strategies under the Qcoast2100 program.
	• Improved certainty for local government for development and conduct of coastal management works.
		• Introduction of 40 business day notification requirement before local government can undertake maintenance dredging for navigational purposes. This may require more strategic scheduling of works or it may create delays in undertaking the required works.

State government	• Use of consistent legislation, zoning arrangements and terminology for all Queensland marine parks, providing a consistent, efficient and user-friendly approach to the management of Queensland's marine environment. • Consistency in management arrangements across marine protected area types in Queensland i.e. declared Fish Habitat Areas and marine parks. • Addresses management actions identified in a number of national and international species management and/or recovery plans that Queensland and/or Australia is a signatory to. • Improved efficiency of zoning plan with removal of redundant or obsolete management arrangements. • Changes to zoning will facilitate maintenance and upgrade works required to public infrastructure such as in the powerline corridor from Tin Can Bay to Rainbow Beach.	• Introduction of 40 business day notification requirement before a state government entity can undertake maintenance dredging for navigational purposes. This may require more strategic scheduling of works or it may create delays in undertaking the required works. • Funding for resources to meet public expectations for a well-managed marine park. First year establishment and operational costs are estimated to require an additional $2.7M with on-going annual costs estimated to require an additional $1M. • Funding of an impact mitigation package for commercial fishers and the post-harvest sector impacted by the proposed removal of the designated Great Sandy Area and the increase in the MNP zone network. • Funding of $2.5million for artificial reefs to provide additional fishing opportunities as part of a Regional Economic

SECTOR	Potential benefits of the draft zoning plan	Potential costs of the draft zoning plan
	• Simplifies compliance, monitoring and enforcement requirements for several activities occurring in the park. • Complementarity with adjacent terrestrial protected area management.	Enhancement Package. • Funding of $6million to enhance recreational boating infrastructure (new/upgrade of public boat ramps), as part of a Regional Economic Enhancement Package. • Funding of a Regional Economic Enhancement Package to provide support for: o affected commercial fishers to develop alternative business opportunities o retraining and employment support for affected commercial fishers o local governments to promote recreational fishing in the region and enhance shore-based fishing opportunities and infrastructure.

9 Consistency with other policies and regulation

9.1 Consistency with fundamental legislative principles

The proposed changes to the GSMP zoning plan are consistent with the fundamental legislative principles set out in the *Legislative Standards Act 1992* that aim to ensure that legislation has sufficient regard to the rights and liberties of individuals and the institutions of Parliament.

The draft zoning plan will impose some restrictions on marine park users through permit requirements and entry or use requirements (which generally reflect those in place under the current zoning plan and zoning plans applying to all other State marine parks), as follows:

- Permits will be required for specified activities that need to be managed to protect the environment and provide for public safety and enjoyment. Applicants for, and holders of, permits will have formal avenues for appeal over permit decisions. There are currently no fees and charges associated with the permits.
- Restrictions and prohibitions will also apply to certain actions or behaviour to protect the environment and to provide for public safety and enjoyment. They include restrictions on vessel speeds in shallow dugong and turtle areas (Go Slow Areas for turtles and dugong), prohibitions on all forms of extraction and disposal in MNP zones (similar to restrictions in terrestrial national parks) and restrictions on anchoring in coral reef habitat. The costs and benefits associated with the restrictions and the various alternatives considered are outlined in more detail in the previous sections.

The draft zoning plan does not affect, diminish or extinguish native title and associated rights for Traditional Owners to take, use or keep natural and cultural resources in accordance with Aboriginal tradition under the Commonwealth *Native Title Act 1993*.

9.2 Consistency with authorising law

The draft zoning plan is consistent with the provisions of the *Marine Parks Act 2004* and the Marine Parks Regulation 2017. Sections 21–24 of the *Marine Parks Act 2004* give the power to develop a zoning plan and prescribe the content of the zoning plan.

9.3 Consistency with other legislation

The draft zoning plan is consistent with other legislation including the:

- *Coastal Protection and Management Act 1995*
- *Environmental Protection Act 1994*
- *Fisheries Act 1994*
- *Nature Conservation Act 1992*
- *Recreation Areas Management Act 2006*
- *Transport Infrastructure Act 1994*
- *Transport Operations (Marine Pollution) Act 1995*
- *Transport Operations (Marine Safety) Act 1994*.

9.4 Competition principles agreement

The guiding principle of the Competition Principles Agreement, under the National Competition Policy, is that legislation should not restrict competition unless it can be demonstrated that: (a) the benefits of the restriction to the community as a whole outweigh the costs; and (b) the objectives of the legislation can only be achieved by restricting competition. The proposed zoning plan changes are consistent with clause 5 of the Competition Principles Agreement.

9.5 Implementation

A revised zoning plan for Great Sandy Marine Park will be prepared following public consultation and is expected to commence in 2023. A delay in commencement pending Governor-in-Council approval of the zoning plan is required to allow for the implementation of an impact mitigation package, to be developed in consultation with industry, for commercial fishers and post-harvest sector businesses affected by zoning plan changes. Existing uses of the marine park that can currently occur as-of-right or with a permission will continue unchanged until the

commencement date. For activities requiring permission, transitional provisions will be in place to allow time for reasonable adjustment to new requirements.

Upon release of the revised marine park zoning plan, information with key messages will be made available at interaction points with government (for example, as part of boat or fishing licensing) and at key community and recreational hubs and locations. The revised marine park zoning plan will also be publicised in regional publications, online and via social media and through notices placed in retail spaces that are generally utilised by marine park users, such as bait shops. Information packs will also be provided to industry stakeholders to inform impacted members. The department will also utilise marine park operational staff and community engagement officers to attend a range of local and regional community events to educate and inform the community about the values of the marine park and the provisions in place both existing and new to manage specific activities.

9.6 Compliance support

Development of the draft zoning plan was undertaken in consultation with regional staff from the Department of Environment and Science to incorporate local and regional knowledge to improve enforcement of and compliance with the proposed management arrangements. Upon implementation, enforcement of the zoning plan provisions would be undertaken through the Queensland Parks and Wildlife Service Division of the department. This may involve actions such as conducting patrols of the marine park, checking permission requirements, verifying reports of non-compliance, issuing on-the-spot fines and potential escalation to investigation and court.

9.7 Evaluation strategy

Implementation of the revised zoning plan will be evaluated on a regular basis to identify if the desired outcomes are being achieved. The measures that will be used to evaluate improvements and the effectiveness of the proposed zoning plan will be developed and may include:

- contemporary research on the extent and condition of biodiversity in the marine park
- reports of injury or mortality of threatened species such as turtles and dugongs
- levels of non-compliance with zoning plan provisions and other information derived from the department's business-as-usual management activities
- engagement with relevant state and local government entities.

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11 Appendices

Appendix 1. Composition of Great Sandy Marine Park Scientific Reference Group (SRG).

Name	Affiliation
Dr Russ Babcock	CSIRO
Dr Michele Barnes	ARC Centre of Excellence for Coral Reef Studies, James Cook University
Prof Bill Carter	University of the Sunshine Coast
Dr Jon Day	ARC Centre of Excellence for Coral Reef Studies, James Cook University
Dr Carissa Klein	The University of Queensland
Dr Andrew Olds	University of the Sunshine Coast
Dr Eva Plaganyi	CSIRO
Dr Susan Rockloff	Central Queensland University
Prof John Rolfe	Central Queensland University
Dr Tim Stevens (Chair)	Griffith University

Appendix 2. Guiding principles recommended by the GSMP Scientific Reference Group (SRG).

Bio-physical Guiding Principles		
Criteria	**Principle**	**Explanation**
Habitat representation	Represent a minimum amount of each 'habitat type' in no-take zones	*Protect representative examples of each habitat type within no-take zones to ensure maintenance of habitats and associated biodiversity* and to deliver a precautionary approach to the marine park zoning.* The Scientific Reference Group (SRG) emphasise the need to set effective representation targets considering international mandates, contemporary standards and the expanding body of evidence that demonstrates the biodiversity conservation benefits of no-take zones. Australia is a signatory to the Convention on Biological Diversity which currently aims for at least 10% of each habitat type to be protected in a system of no-take areas by 2020. More recent guidance, such as from the International Union for Conservation of Nature (IUCN) and from research by SRG members, recommends the designation and implementation of at least 30% of each marine habitat in a network of highly protected MPAs and other effective area based conservation measures. The SRG therefore recommends that the review of the Great Sandy Marine Park zoning plan should aim for a **minimum of 30% of each habitat type within the marine park to be protected in a system of no-take zones**[#], noting that certain habitats (e.g. those that are unique or critical to threatened species) may require a greater level of protection in no-take zones. **[#]On 4 August 2020, the SRG provided a revised habitat representation target of a minimum of 30% of the area of vulnerable habitat types and 10-30% of the area of non-vulnerable habitat types.** *Biodiversity is described as the variety of life forms and the habitats that make up a region.
Vulnerable habitats	Protect vulnerable habitats in no-take zones	*Vulnerable habitats and their associated flora and fauna values should be effectively protected in no-take zones. Habitat types defined as 'vulnerable' are typically those that are easily disturbed or transformed by human actions and are slow to recover after disturbance. The extent of protection required depends on the degree of vulnerability of the habitat and may exceed the minimum 30% target required for general habitat representation.* The SRG identify the coral / reef habitats (including coral reefs, reefal gardens, coffee rock, paleochannel reef communities and the gastropod reef), mangroves, saltmarsh and seagrass as the more vulnerable habitat types within the marine park. The SRG recommends that where an area of vulnerable habitat is incorporated into a no-take zone, ideally and where practical, the entirety of that habitat should be included (i.e. include an entire reef, rather than only part of it). The SRG noted that this is unlikely to be possible for the more extensive,

		vulnerable habitats such as seagrass.
Size	Create larger no-take zones	*Larger no-take zones are generally preferred to minimise edge effects*. No-take zones should be adequately sized to protect each representative area of habitat from relevant threatening processes and should also aim to protect the home range of any focal species within those habitats.* *Edge effects are defined as the change in species composition, physical conditions, or other ecological factors at the boundary between two ecosystems.
Replication	Replicate representative habitat types in no-take zones	*Each habitat type should be protected in more than one no-take zone to account for 'within habitat type' variation (e.g. not all seagrass beds are the same) and to support habitat resilience (e.g. as a precaution against climate change or major localised damage).*
Connectivity	Provide connectivity within the network of no-take zones	*No-take zones should be spaced and located to support the transfer of organisms (offspring, juveniles, adults) and genetic exchange between populations to create connectivity through the network of no-take zones. The spacing required to maintain connectivity between no-take zones can be increased if the no-take zones are larger.* Maintaining connectivity with key habitats adjacent to the marine park is also noted by the SRG as a factor for consideration in marine park zoning.
Ecosystem linkages	Include consideration of ecosystem links among habitats, and of sea and adjacent land uses in determining no-take zones	*Areas that support other habitats, or are dependent on other habitats (ecosystem links), should be protected. Past and present uses may have influenced the integrity of biological communities, and need to be considered when choosing no-take zones. For example, existing no-take zones and areas adjacent to terrestrial protected areas are likely to have greater biological integrity than areas that have been used for resource exploitation. Building upon these areas is a good starting point for an enhanced network of no-take zones.*
Vulnerable life stages	Protect vulnerable life-stages of species in no-take zones	*Vulnerable life stages of species should be effectively protected in no-take zones. The inclusion of localities where a species becomes especially vulnerable, or which are vital for completion of their life cycle (such as critical nursery areas, spawning or nesting sites), adds value to a candidate no-take zone.*
Species and areas of special interest	Include species, populations and areas of special interest in no-take zones	*Species, populations and areas of conservation concern (e.g. locations critical to threatened, rare, endangered or restricted-range species and areas with particular geomorphologic features or naturalness) should be effectively protected in no-take zones.* The extent of protection required, depends on the degree of vulnerability, with the SRG noting that some locations that are critical to a species of conservation concern may require the entire area of that habitat to be protected in a no-take zone.
Resilience	Provide for future resilience against natural or human-induced changes, climate change or threatening	*Areas that are less likely to be subject to impacts and have a high degree of naturalness (i.e. less exploited) should be considered for no-take zones to ensure greater resilience against future change or threats.* The SRG notes that inclusion of preservation zones (no-take, no-entry

	processes	areas) over some examples of pristine habitat is important to: • support resilience to climate change, • allow ongoing monitoring of climate change impacts, and • understand the ecological limits of natural systems undisturbed from human use
Integrated Management	Support no-take zones with complementary zoning, designated areas and other management	*The core network of no-take zones should be supported by complementary zoning of surrounding areas and the implementation of designated areas (e.g. Go Slow Areas, No anchoring Areas) and other management arrangements (e.g. temporal closures) to address specific threats and to deliver a comprehensive and integrated management framework that protects the biophysical values within the marine park.*

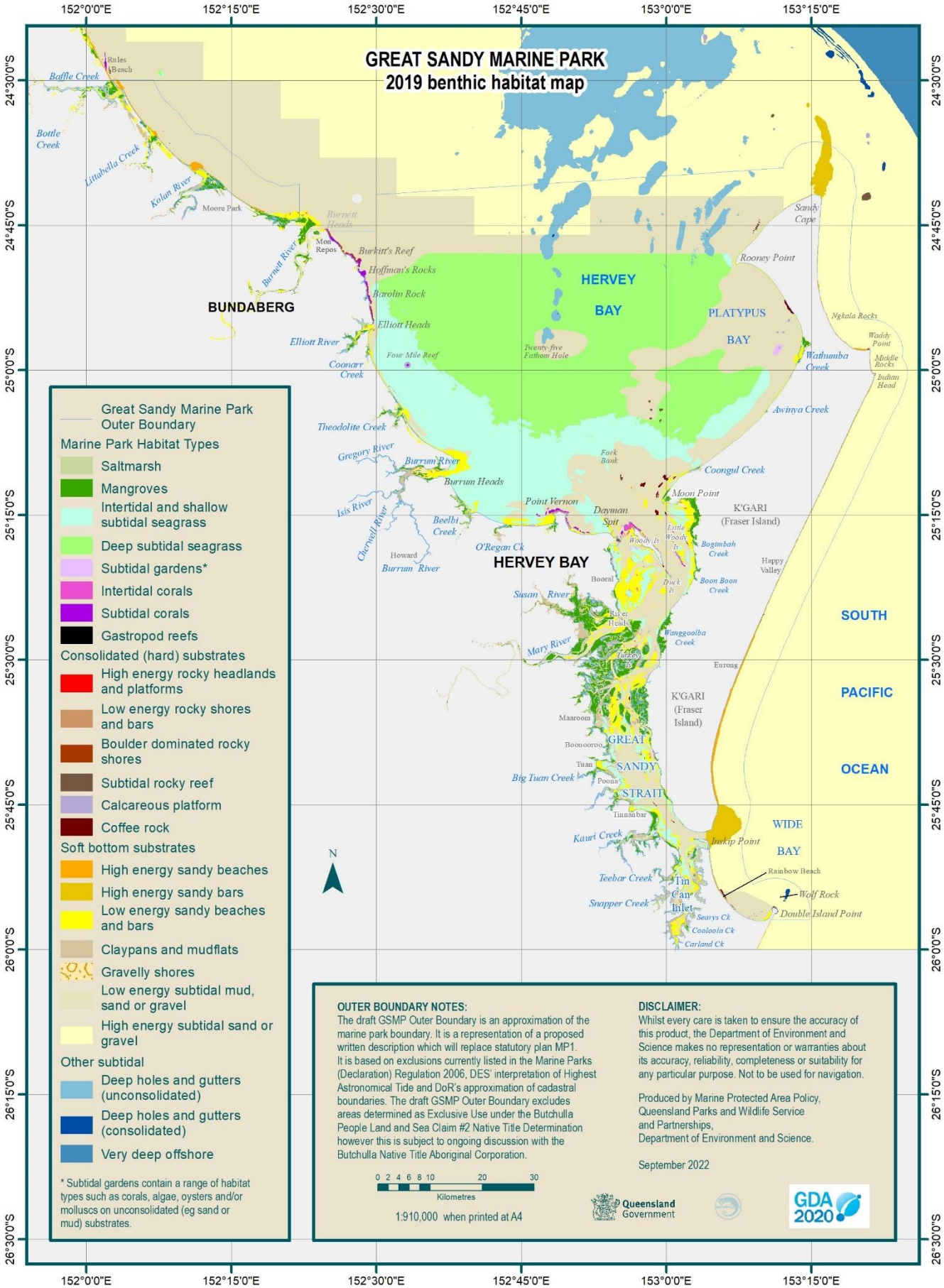
Socio-economic Guiding Principles		
Criteria	**Principle**	**Explanation**
Balancing conservation and sustainable use	Ensure the zoning considers social, economic, cultural and environmental costs and benefits	*Zoning selection should be made considering the costs and benefits to the community (being multiple communities of place and interest). This acknowledges the objective to achieve a balance between conservation goals and the need for continued sustainable use.* The SRG notes that recent social research has identified that there are sites within marine parks that are highly valued by users, due to the quality of experience that they provide (e.g. a peaceful amenity value), rather than for more obvious ecological, economic or social values. These social values should also be recognised and factored into zoning considerations, particularly in the face of coastal population growth, and corresponding trends in tourism and recreational vessel numbers and patterns of use.
Minimise impacts	Minimise the impact of zoning on human interactions with the marine park including access, activities, values and aspirations	*Zoning should minimise impacts on users of the marine park, including minimising impact on reasonable access to natural food resources that can be obtained with a minimal carbon footprint. For example, fishing and boating should remain a significant and integral activity within the marine park. Engagement of stakeholders and the community in a participatory process that is open and transparent should be ongoing throughout the review process.*
Support First Nations peoples' interests	Support First Nations peoples' aspirations and protect sites of cultural importance	*Zoning should support First Nations peoples' aspirations for their sea country and where appropriate, manage threats to sites of cultural importance (e.g. no-anchoring provisions to protect fish traps).* *Open and transparent engagement with First Nations peoples should be ongoing throughout the review process and Native Title interests should be acknowledged.*
Management complementarity	Complement, where possible, other management mechanisms and arrangements that affect the marine park	*In considering zoning options, other arrangements that may protect and/or manage the marine environment should be taken into account to minimise conflict and provide greater operational clarity. As part of the review, other environmental conservation legislation, management of use and major initiatives to protect the marine park's values should be considered. For example, policies and strategies dealing with marine pollution, international wetlands, national parks, declared Fish Habitat Areas, fisheries management, water quality and coastal development all have relevance to marine park planning and management.*

Efficient and effective	Maximise the understanding of the marine park and the manageability of zones	*The final zoning plan should consider operational and implementation issues to help provide for efficient management and enforcement. Uses in the marine park should be consistent, where practicable, with other state marine parks to help the community understand and appreciate conservation and use of the marine environment. An awareness campaign to maximise the understanding of the marine park should also be conducted.*

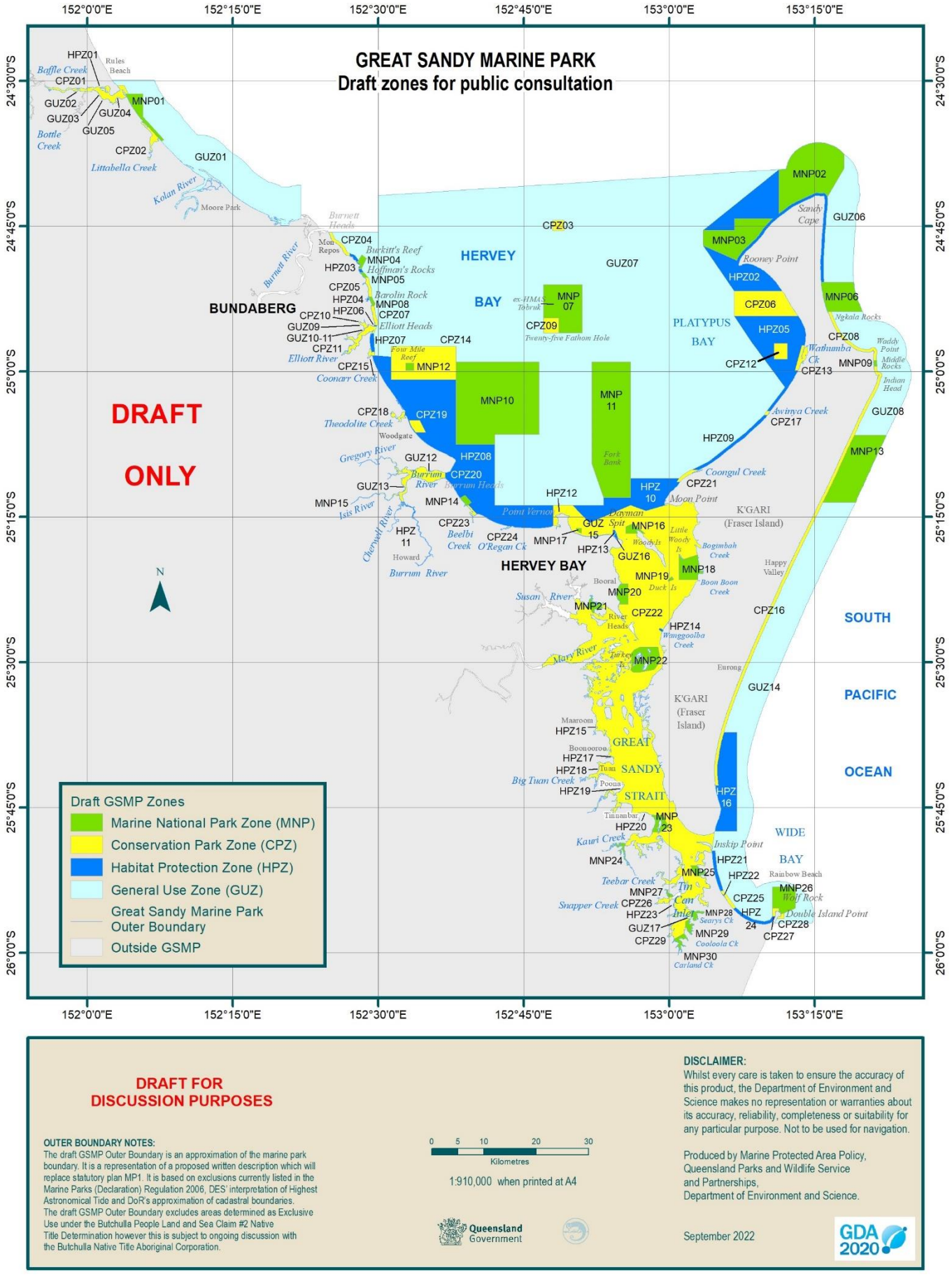
In addition to the above bio-physical and socio economic principles the SRG recommends the following general management principles should also be applied to the zoning plan review:

1. No-take zones should be considered as a long-term conservation mechanism and be retained even if the habitats within these zones change over time.
2. Designated areas should be applied to support and enhance the underlying zoning provisions.
3. Design of the zoning should take into account scientific best practice in experimental design and monitoring.
4. In drawing zone boundaries or management provisions, the precautionary principle should be employed, recognizing limitations of the extent and accuracy of current habitat mapping within GSMP.

Appendix 3. Habitat map



Appendix 4. Draft zoning plan (zones)



Appendix 5. Basis for Proposed Zoning

Marine National Park Zones

Proposed Identifier	**MNP01 – Near Baffle Creek**
Proposal	**Establish a new MNPZ.**
Total area	11km^2
Current zoning	GUZ
Justification	• Protects a 2km^2 representative area of high energy open sandy foreshore habitat (sand and sandy beach) with the remainder predominantly sandy mud habitat within the north-western foreshore area of Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these open sandy foreshore habitat types including infauna, invertebrates and epibenthic fish. • Directly adjoins the Mouth of Baffle Creek Conservation Park, providing integrated protected area status and protection across the marine and terrestrial interface. • Complements the adjacent Baffle Creek declared Fish Habitat Area. • Avoids the Baffle Creek mouth that is a popular fishing location. • Incorporates the mouth of Littabella Creek. • Location minimises potential interaction with offshore trawling. • Increases proportion of MNPZs in the north-western area of Hervey Bay.
Proposed Identifier	**MNP02 – Breaksea Spit**
Proposal	**Extend existing MNP12** to the north and north-east to incorporate the area of Breaksea Spit that is within the revised Marine Park outer boundary.
Total area	98km^2
Current zoning	Existing MNPZ with proposed extension over GUZ and area not currently within the marine park
Justification	• Protects a 98km^2 representative area of high energy subtidal sands and high energy sandy beach and bar habitats. • Comprehensively includes the part of Breaksea Spit that is within the marine park as a significant and unique geomorphological feature. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these high energy sandy habitat types. • Includes key courtship, inter-nesting and basking areas for vulnerable green turtles (*Chelonia mydas*) and endangered loggerhead turtles (*Caretta caretta*). • Overlays a key migratory pathway for loggerhead turtles returning to nest from southern areas including Moreton Bay.

	• Includes key habitat for vulnerable dugongs (*Dugong dugon*), including those undertaking seasonal migrations across Hervey Bay in search of warmer waters, and dugongs migrating from southern areas including Moreton Bay. • Partially overlaps the Fraser Island declared Fish Habitat Area. • Boundary extension aligns with revised outer boundary of the marine park. • Location minimises impacts on offshore trawl fishery.
Proposed Identifier	**MNP03 – Ferguson Spit**
Proposal	**Extend existing MNP11** west to more effectively incorporate the unique gastropod reef and north to include the entirety of Keith's Reef.
Total area	50km^2
Current zoning	Existing MNPZ with proposed extension over HPZ and GUZ
Justification	• Protects a 50km^2 representative area of subtidal sand and rocky reef habitat (low energy subtidal sand and gravel, deep unconsolidated holes and coffee rock) at the north-eastern extremity of Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these subtidal sand and rocky reef habitat types. • Incorporates a rare, deep water reef community (approximately 30m depth), in its entirety, that provides habitat for encrusting *Siliquariidae sp.* gastropods that live in close association with *Irciniidae sp.* sponges. • Includes Keith's Reef, a subtidal rocky reef habitat. • Includes key courtship, inter-nesting and feeding area for vulnerable green and endangered loggerhead turtles. • Includes key habitat for vulnerable dugongs, including those undertaking seasonal migrations across Hervey Bay in search of warmer waters, and dugongs migrating from southern areas including Moreton Bay. • Overlays part of a key migration pathway used by endangered loggerhead turtles returning to Hervey Bay to nest from southern areas (including Moreton Bay) and by humpback whales (*Megaptera novaeangliae*), including mother-calf pairs, during their migration to Antarctica. • Partially overlaps the Fraser Island declared Fish Habitat Area. • Increases representation of unvegetated, low energy sandy habitat types and larger representative area of vulnerable coffee rock habitat.
Proposed Identifier	**MNP04 – Burkitt's Reef**
Proposal	**Retain existing MNP01** but utilise geographic coordinates to improve boundary definition.
Total area	2km^2
Current zoning	MNPZ
Justification	• Protects a 2km^2 representative area of inshore fringing coral reef and rocky basalt foreshore habitat (boulder dominated rocky shores, intertidal and subtidal corals habitat types) along the Woongarra coastline of Hervey Bay.

	• Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these coral and rocky reef habitat types. • Supports a diverse soft coral community with a high abundance of finger leather coral (*Cladiella sp.)* and other less common Hervey Bay coral species. • Generally represents the southern limit of inshore fringing sub-tidal coral reef communities. • Includes an important endangered loggerhead turtle inter-nesting and transit area adjacent to a significant nesting beach. • Clarifies the inshore boundary of the MNPZ with geographic coordinates. • Inshore boundary not extended to HAT to allow for consideration of future coastal protection works at adjacent properties.
Proposed Identifier	**MNP05 – Hoffman's Rocks**
Proposal	**Retain existing MNP02** but utilise geographic coordinates to improve boundary definition and adjust southern boundary to reduce conflict.
Total area	1km^2
Current zoning	MNPZ
Justification	• Protects a 1km^2 representative area of fringing coral reef and rocky basalt foreshore habitat - predominantly subtidal soft coral communities - along the Woongarra coastline of Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these rocky reef habitat types. • Generally represents the southern limit of inshore fringing sub-tidal coral reef communities. • Includes an important endangered loggerhead turtle inter-nesting and transit area near a significant nesting beach. • Landside boundary of MNPZ moved closer inshore (approximately 30m from HAT) to protect intertidal corals and geographic coordinates define the boundary to allow for consideration of future coastal protection works at adjacent properties. • Existing southern boundary moved north to clarify the boundary location and address long-term compliance issues.
Proposed Identifier	**MNP06 – North of Ngkala Rocks**
Proposal	**Establish a new MNPZ.**
Total area	32km^2
Current zoning	HPZ and GUZ
Justification	• Protects a 32km^2 representative area of high energy beaches and subtidal sand within the offshore waters on the eastern side of K'gari to the eastern extent of the marine park. • Protects a small area of high energy rocky outcrop. • Directly adjoins the Great Sandy National Park providing integrated national park status and protection area across the marine and terrestrial interface. • Continuous protection of marine habitats from beach to the offshore marine park boundary – the only example of this in the marine park.

	• Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these beach and sandy habitats. • Overlays part of a key migration pathway for vulnerable dugongs and endangered loggerhead turtles. • Partially overlaps the Fraser Island declared Fish Habitat Area. • Avoids popular beach camping sites south of Ngkala Rocks. • Location minimises impacts on offshore trawl fishery.
Proposed Identifier	**MNP07- Hervey Bay Paleochannel**
Proposal	**Establish a new MNPZ** to protect an example of the Mary River paleochannel deep water habitats.
Total area	55km^2
Current zoning	GUZ
Justification	• Protects a 55km^2 representative area of seagrass and rocky reef habitat (deep holes and gutters) within central Hervey Bay. • Protects a representative section of the Mary River paleochannel (ancient river channel) deep-water habitats that extend through Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these seagrass and rocky reef habitat types including vulnerable dugong. • Incorporates deep channel areas that many species use as routes between areas of habitat. • Directly adjoins the 25 Fathom Hole Conservation Park Zone. • Very high density of vulnerable dugong recorded in 2016 aerial surveys. • Location minimises impact on offshore trawl fisheries. • New MNPZ increases representation of vulnerable seagrass and rocky reef (deep holes and gutters) habitat types and includes a larger area of the Paleochannel than what is currently incorporated in the 25 Fathom Hole CP zone. • Incorporates the ex-HMAS Tobruk dive site.
Proposed Identifier	**MNP08 – Barolin Rock**
Proposal	**Retain existing MNP03** but utilise geographic coordinates to enhance boundary definition.
Total area	1km^2
Current zoning	MNPZ
Justification	• Protects a 1km^2 representative area of fringing coral reef and rocky basalt foreshore habitat (intertidal and subtidal corals, boulder dominated rocky shores) along the Woongarra coastline of Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these rocky reef habitat types. • Includes areas recognised for their high soft coral coverage (particularly *Cladiella* spp.) and diversity.

	• Includes an important endangered loggerhead turtle inter-nesting and transit area. • Adjacent to a nesting beach used by a small number of endangered loggerhead turtles. • Landside boundary of MNPZ moved offshore approximately 30m and geographic coordinates define the boundary to allow for consideration of future coastal protection works at adjacent properties.
Proposed Identifier	**MNP09 – Middle Rocks**
Proposal	**Retain existing MNP13.**
Total area	1km^2
Current zoning	MNPZ
Justification	• Protects a 1km^2 representative area of exposed headland and rocky platform habitat (high energy rocky headlands and platforms and high energy subtidal sand) on the north-eastern shoreline of K'gari. • Protects a key geological feature of the K'gari coastline, which along with Waddy Point and Indian Head traps north moving sand and creates the 'anchor points' for the K'gari sand mass. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these subtidal exposed headland and rocky platform habitat types, including rock pool fauna communities, such as fish, anemones, echinoderms. • Directly adjoins the Great Sandy National Park, providing integrated national park status and protection area across the marine and terrestrial interface. • Partially overlays the Fraser Island declared Fish Habitat Area. • Partially overlays the Fraser Island World Heritage Area.
Proposed Identifier	**MNP10 – Offshore of Woodgate**
Proposal	**Extend existing MNP04** significantly to the north and east to incorporate additional seagrass habitat important to turtles and dugongs.
Total area	211km^2
Current zoning	Existing MNPZ with proposed extension over GUZ
Justification	• Protects a 211km^2 representative area of seagrass habitat (shallow and deep subtidal seagrass habitat) within western Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these seagrass habitat types. • Includes an important resting, transit and feeding area for vulnerable dugongs and turtles. • Minimises impact on fisheries (nearshore recreational and commercial fisheries and offshore trawl fisheries). • Location avoids existing and planned aquaculture areas. • Protects shallow and deep subtidal seagrass habitat important to threatened species – turtles and dugongs. • Increases representation of vulnerable shallow and deep subtidal seagrass and unvegetated sandy habitat types.

Proposed Identifier	**MNP11 – Fork Bank**
Proposal	**Extend existing MNP10** to the north to incorporate additional seagrass habitat important to turtles and dugongs.
Total area	167km^2
Current zoning	Existing MNPZ with proposed extension over GUZ
Justification	• Protects a 167km^2 representative area of seagrass and unvegetated sand habitat (shallow subtidal and deep subtidal seagrass) within central and southern Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these seagrass and sandy habitat types. • Includes an important resting, transit and feeding area for vulnerable dugong and turtles. • Location avoids navigation channels and minimises impact on trawl fishery.
Proposed Identifier	**MNP12 – Four Mile Reef**
Proposal	**Establish a new MNPZ.**
Total area	2km^2
Current zoning	GUZ

Justification	• Protects the only fully subtidal and deepest coral reef (10m below Lowest Astronomical Tide) within the marine park that has the following key features:
	  ○ the only reef in the marine park with a solid calcareous reef base and a vertical, continuous building structure, similar to that of reefs within offshore regions of the Great Barrier Reef
	  ○ a coral community that is dominated by high-density hard corals (*Pocillopora sp.*) which is unusual at both a local and regional level, showing parallels to coral reef formations found in Central/South America
	  ○ value as a climate change refuge due to its depth and location (~5km offshore) which protect the reef from extreme weather and flood water impacts.
	• Protects a representative example of (and refuge for) the flora and fauna species associated with this coral reef habitat.
	• Incorporates the entire reef system.
	• Protection of a different reef type to others proposed to be included in MNPZs (solid calcareous reef with high density of *Pocillopora sp.*hard corals).
	• Size provides a 100m buffer from the outer reef edge.

Proposed Identifier	**MNP13 – Offshore of Wyuna Creek**
Proposal	**Establish a new MNPZ.**

Total area	71km^2
Current zoning	GUZ
Justification	• Protects a 71km^2 representative area of high energy sand habitat within the waters offshore from K'gari to the extent of the marine park. • Protects a representative example of (and refuge for) the flora and fauna species associated with this high energy sand habitat. • Overlays part of a key migration pathway for species such as sea mullet (*Mugil cephalus*), tailor (*Pomatomus saltatrix*), eastern king prawns (*Penaeus plebejus*), vulnerable dugongs and endangered loggerhead turtles. • Location minimises impacts on public use of the beach for fishing and the offshore trawl fishery.
Proposed Identifier	**MNP14 – Marsh Creek**
Proposal	**Extend existing MNP09** further offshore and to the north and south to include foreshore habitats and to accommodate natural creek mouth movement.
Total area	2km^2
Current zoning	Existing MNPZ with proposed extension over HPZ
Justification	• Protects a 2km^2 representative area of estuarine and foreshore habitat (intertidal and shallow subtidal seagrass, sandy habitat, and a small area of mangrove and saltmarsh) on the south-western side of Hervey Bay. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these upper estuarine and foreshore habitat types. • Directly adjoins a shorebird high tide roost area for species such as endangered curlew sandpipers (*Calidris ferruginea*), lesser sand plovers (*Charadrius mongolus*) and eastern curlews (*Numenius madagascariensis*). • Protects important seagrass habitat used by high densities of vulnerable dugongs. • Directly adjoins the Burrum Coast National Park, providing integrated national park status, connectivity with protected mangrove and saltmarsh habitats and protection area across the marine and terrestrial interface. • Overlays part of the Beelbi declared Fish Habitat Area. • Ensures the MNPZ can accommodate natural creek movement within its boundary. • Location avoids navigation channels. • Aligns the southern boundary with revised boundary of the Go Slow Area. • Increases representation of vulnerable seagrass, mangrove and saltmarsh habitat types and unvegetated sandy habitat type.
Proposed Identifier	**MNP15 – Isis River**
Proposal	**Modify existing MNP06** to align its downstream boundary with the boundary of the Burrum Coast National Park (results in loss of 600m length of waterway that is currently MNPZ adjoining freehold land).
Total area	0.2km^2

Current zoning	MNPZ
Justification	• Protects a 0.2km^2 representative area of upper estuarine habitat (low energy rocky shores and bars) in the Isis River system. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these upper estuarine habitat types. • Overlays a small part of the Burrum declared Fish Habitat Area.
Proposed Identifier	**MNP16 – Woody Island**
Proposal	**Extend existing MNP14** in all directions to more comprehensively incorporate the coral habitats within this location.
Total area	4km^2
Current zoning	Existing MNPZ with proposed extension over CPZ
Justification	• Protects a 4km^2 representative area of coral reef habitat (intertidal and subtidal corals, subtidal gardens, rocky and sandy shores) within the northern Great Sandy Strait. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these reef habitat types. • Includes the richest individual coral reef site in the marine park with 43 hard coral species recorded, unique and extensive (covering 300-400m^2) monospecific stands of branching coral (*Acropora sp.)* and brain coral (Family Faviidae) colonies considered to be more than a century old. • Protects a coral community that has proved to be one of the more resilient communities in the marine park despite its relatively close proximity the Mary River mouth and associated frequency of flooding impacts. • Given the levels of coral abundance and diversity and its location, Big Woody is well-placed to provide larvae southward, to reefs in Great Sandy Strait, westward to reefs along the Hervey Bay foreshore and northward to reefs along the Woongarra coastline, important for post-disturbance recovery. • Location avoids navigational channels and adjacent artificial reef site. • Minimises impacts on access and use of Big Woody Island and its surrounding habitats. • Increases representation of vulnerable coral and subtidal garden habitat types as well as unvegetated sandy habitat types.
Proposed Identifier	**MNP17 - Pialba**
Proposal	**Establish a new MNPZ.**
Total area	1km^2
Current zoning	CPZ
Justification	• Protects a 1km^2 representative area of inshore coral reef habitat (subtidal coral, low energy subtidal sand, calcareous platform and gravelly shores) on the southern foreshore of Hervey Bay. • Includes an example of a healthy fringing coral reef formation, that is:

	○ estimated to be 6,500 years old, and supports seven of the eleven known species of *Turbinaria* coral recorded in the Indo-Pacific region and a suite of branching soft corals such as *Cladiella sp* ○ highly resilient, despite its proximity to developed areas and exposure to runoff from flood events. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these inshore coral reef habitat types. • Location minimises impacts on public uses of the shoreline (e.g. fishing from the beach). • Incorporates the entire reef system. • Increases representation of vulnerable coral reef habitat types and unvegetated sand and gravel habitat types.
Proposed Identifier	**MNP18 – Little Woody Island**
Proposal	**Retain existing MNP15.**
Total area	15km^2
Current zoning	MNPZ
Justification	• Protects a 15km^2 diverse and representative area of high-quality habitats (one creek system, saltmarsh, mangroves, seagrass, corals, subtidal gardens, low energy beaches and bars) within the northern Great Sandy Strait. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these diverse habitat types. • Includes one significant shorebird roost site that supports nationally significant numbers (i.e. 0.1% of the East Asian-Australasian Flyway population) of the whimbrel and critically endangered far eastern curlew. • Protects area important to transiting turtles and Australian humpback dolphins (*Sousa sahulensis*). • Directly adjoins the Great Sandy National Park, providing integrated national park status and protection area across the marine and terrestrial interface. • Historically included significant sponge gardens growing on a course gritty substrate along with soft corals, hydroids, gorgonians, sea pens, worm shell reefs and a low density cover of hard corals, however these were heavily impacted by floods in 2011 and are yet to recover.
Proposed Identifier	**MNP19 – Duck Island**
Proposal	**Modify existing MNP16** to more accurately incorporate the habitats originally intended for inclusion in this MNPZ.
Total area	0.4km^2
Current zoning	MNPZ with small extension over CPZ
Justification	• Protects a 0.4km^2 representative area of estuarine habitat (low energy sandy beaches and bars, seagrass and small amount calcareous platform) within the northern Great Sandy Strait. • Protects a representative example of (and refuge for) the flora and fauna species associated with these diverse habitat types. • Includes a significant shorebird high tide roost site that supports nationally significant numbers of bar-tailed godwits and far eastern curlew.

	• Overlays part of the Great Sandy Strait Ramsar internationally important wetland. • Revised boundary more accurately incorporates the habitats originally intended for inclusion when the marine park was established.
Proposed Identifier	**MNP20 – Mangrove Point**
Proposal	**Retain existing MNP17 and extend** east.
Total area	7km^2
Current zoning	MNPZ with extension over CPZ
Justification	• Protects a 7km^2 representative area of estuarine habitat (mangrove, saltmarsh, intertidal low energy beach and bar habitats) within the northern Great Sandy Strait. • Includes representative areas of un-vegetated habitats (low energy sand and mud). • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these estuarine habitat types. • High use foraging area for endangered loggerhead and vulnerable green turtles and basking area for vulnerable green turtles (creek area near the most north-west boundary point of the MNPZ). • Includes habitat for the vulnerable water mouse (*Xeromys myoides*) and is a feeding area for shorebirds. • Adjoins a significant shorebird high tide roost site that supports internationally significant numbers (i.e. 1% of the East Asian-Australasian Flyway population) of the critically endangered Far Eastern Curlew and nationally significant numbers of the bar-tailed godwit and whimbrel. • Overlays part of the Great Sandy Strait Ramsar internationally important wetland. • Increases representation of vulnerable seagrass habitat unvegetated subtidal mud and sand habitat types.
Proposed Identifier	**MNP21 – Susan River**
Proposal	**Establish a new MNPZ.**
Total area	4km^2
Current zoning	CPZ
Justification	• Protects a 4km^2 representative area of upper estuarine mangrove dominated habitat (mangrove, saltmarsh, claypan, and mudflat habitats) within the Susan River. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these upper estuarine habitat types. • Includes stands of cannonball mangroves (*Xylocarpus granatum*) which are at the southern limit of their distribution. • Includes Grey (*Avicennia marina*) and River (*Aegiceras corniculatum*) mangrove stands, a recognised habitat for the vulnerable Illidge's ant blue butterfly (*Acrodipsas illidgei*). • Adjacent to a significant shorebird high tide roost site that supports nationally significant numbers (i.e. 0.1% of the East Asian-Australasian Flyway population) of the critically endangered eastern curlew and the sharp-tailed sandpiper.

	• Overlays part of the Susan River declared Fish Habitat Area. • Increases representation of vulnerable mangrove and saltmarsh habitat types, and unvegetated mudflat habitat types.
Proposed Identifier	**MNP22 – Bookar, Walsh, Turkey Islands**
Proposal	**Retain existing MNP18 and MNP20 and the eastern side of MNP19 and consolidate into a new expanded MNPZ.**
Total area	18km^2
Current zoning	MNPZs with extension over CPZ
Justification	• Protects a representative area of mangrove island and estuarine habitats (mangrove, saltmarsh, seagrass, mudflat, sandy habitats) within the central Great Sandy Strait. • Provides a representative example of (and refuge for) the flora and fauna species associated with these mangrove island and estuarine habitat types. • Includes foraging areas for endangered loggerhead turtles (Caretta caretta), vulnerable dugongs and Australian humpback dolphins. • Adjoins a significant shorebird high tide roost site that supports nationally significant numbers (i.e. 0.1% of the East Asian-Australasian Flyway population) of the critically endangered eastern curlew, grey-tailed tattler and whimbrel. • Overlays part of the Maaroom declared Fish Habitat Area. • Increases representation of vulnerable mangrove, saltmarsh and seagrass habitat types and unvegetated, low energy sand and mudflat habitat types. • Location avoids primary navigation channels. • Addresses long-term boundary uncertainty and compliance matters. • Utilises geographic coordinates to improve boundary definition.
Proposed Identifier	**MNP23 – Cowra Point**
Proposal	**Establish a new MNPZ.**
Total area	6km^2
Current zoning	CPZ
Justification	• Protects a 6km^2 representative area of shallow estuarine habitats (saltmarsh, exposed mangroves, intertidal and shallow subtidal seagrass, sandy beaches and bars) within the southern Great Sandy Strait. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these shallow estuarine habitat types. • Directly adjacent to Great Sandy Conservation Park, providing integrated protected area status and protection across the marine and terrestrial interface. • Protects shallow water habitats important for foraging vulnerable green turtles. • Protects shallow water habitats important for very high densities of vulnerable dugong.

	• Includes habitat for the vulnerable water mouse. • Overlays part of the Kauri Creek declared Fish Habitat Area. • Eastern boundary aligns with proposed expansion to Go Slow Area for turtles and dugong. • Location avoids navigation channels and transit lane. • Additional MNPZ in southern part of Great Sandy Strait. • Increases representation of vulnerable mangrove, seagrass and saltmarsh habitat types. • Protects areas of mangrove and saltmarsh abutting a natural area with potential for landward migration. • Provides connectivity between complementary vulnerable habitats.
Proposed Identifier	**MNP24 – Kauri Creek**
Proposal	**Retain existing MNP23.**
Total area	3km^2
Current zoning	MNPZ
Justification	• Protects a 3km^2 representative area of mid and upper estuarine habitats (mangrove, saltmarsh, claypan, rock bar, mudflat and sandy habitats) within a larger mainland waterway at the southern end of the Great Sandy Strait. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these mid and upper estuarine habitat types. • Directly adjoins the Wide Bay Military Training Area which limits landside access and land-based impacts to the creek. • Includes habitat for the vulnerable water mouse. • Overlays part of both the Great Sandy Strait Ramsar internationally important wetland and the Kauri Creek declared Fish Habitat Area. • Protects areas of vulnerable mangrove and saltmarsh habitat types abutting a natural area with potential for landward migration.
Proposed Identifier	**MNP25 – Myers Creek**
Proposal	**Extend existing MNP24** to the north, south and west to more comprehensively incorporate the entire Myers Creek estuary.
Total area	3km^2
Current zoning	Existing MNPZ with proposed extension over CPZ
Justification	• Protects a 3km^2 representative area of shallow water estuarine habitats (saltmarsh, seagrass, claypan, mudflats, sandy beach and bar habitats, coffee rock ledge) on the western side of the Inskip Peninsula. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these shallow estuarine habitat types. • Protects shallow water habitats used by vulnerable green turtles. • Overlays part of the Kauri Creek declared Fish Habitat Area. • Protects areas of vulnerable saltmarsh habitat type abutting a natural area with potential for landward migration.

	• Increases representation of coffee rock (Teebar Ledge), unvegetated, low energy mudflat and sandy habitat types. • Provides connectivity across complementary vulnerable habitats.
Proposed Identifier	**MNP26 – Wolf Rock**
Proposal	**Extend existing MNP29** to more effectively protect grey nurse shark aggregation areas and to incorporate part of Double Island Point.
Total area	18km^2
Current zoning	MNPZ with proposed extension over BUZ, GUZ and CPZ
Justification	• Protects an area of nationally significant habitat for the endangered east coast population of grey nurse sharks (*Carcharias taurus*). • Protects a 18km^2 area of habitat that includes the significant geological formations/rock structures of Wolf Rock, the Pinnacles and Round Rock. • Protects part of the Double Island Point headland, which is a key geological feature of the marine park and a key 'anchor points' for the Cooloola sand mass. • Directly adjoins the Great Sandy National Park, providing integrated national park status and protection area across the marine and terrestrial interface. • Supports high species diversity including iconic species such as turtles, manta rays, Queensland groupers, and hard and soft corals and associated reef fauna communities. • Location minimises impacts to land-based fishers accessing rocks at the base of Double Island Point and commercial trawl fishers in the south-eastern part of the zone.
Proposed Identifier	**MNP27 – Griffen Creek**
Proposal	**Retain existing MNP28.**
Total area	1km^2
Current zoning	MNPZ
Justification	• Protects a 1km^2 representative area of shallow water estuarine habitats (saltmarsh, claypan and mudflat habitats) within a small mainland waterway in the southern part of the marine park. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these shallow estuarine habitat types. • Includes habitat for the vulnerable water mouse. • Directly adjoins the Wide Bay Military Training Area which limits land-based access and impacts. • Overlays part of the Great Sandy Strait Ramsar internationally important wetland. • Protects areas of vulnerable saltmarsh habitat type abutting a non-developed area allowing potential for landward migration of this habitat in response to sea level rise.

Proposed Identifier	**MNP28 – Searys Creek**
Proposal	**Extend existing MNP25** to the north and west to more comprehensively incorporate the entire Searys Creek estuary.
Total area	2km^2
Current zoning	Existing MNPZ with proposed extension over CPZ
Justification	• Protects a 2km^2 representative area of shallow water estuarine habitats (saltmarsh, mangroves, claypans, mudflats, and sand bar habitats) near the southern extent of the marine park. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these shallow estuarine habitat types. • Includes habitat for the vulnerable water mouse and provides roosting habitat for shorebirds. • Directly adjoins the Great Sandy National Park, providing integrated national park status and protection area across the marine and terrestrial interface. • Overlays part of the Tin Can Inlet declared Fish Habitat Area. • The boundary allows fishing to continue in the main channel and western side of Tin Can Inlet. • Location avoids an infrastructure corridor and hence allows for maintenance and potential future upgrade of electricity infrastructure that crosses Tin Can Inlet from North Cooloola Point to Teewah Point. • Protects areas of vulnerable mangrove and saltmarsh habitat types abutting a natural area with potential for landward migration of these habitats in response to sea level rise. • Increases representation of unvegetated, low energy mudflat and sandy habitat types in MNP zones.
Proposed Identifier	**MNP29 – Cooloola Creek**
Proposal	**Extend existing MNP26** to the north-west to more comprehensively incorporate the entire Cooloola Creek system, including its extensive foreshore flats.
Total area	2km^2
Current zoning	Existing MNPZ with proposed extension over CPZ
Justification	• Protects a 2km^2 representative area of shallow water estuarine habitats (saltmarsh, claypan, mangroves, and sand bar habitats) near the southern extent of the marine park. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these shallow estuarine habitat types. • Directly adjoins the Great Sandy National Park, providing integrated national park status and protection area across the marine and terrestrial interface. • Overlays part of the Tin Can Inlet declared Fish Habitat Area. • Allows fishing to continue in the main channel and western side of the inlet. • Allows for foreshore use and fishing adjacent to the camping area at Poverty Point.

	• Location allows for maintenance and potential future upgrade of electricity infrastructure that crosses Tin Can Inlet from North Cooloola Point to Teewah Point. • Protects areas of vulnerable mangrove and saltmarsh habitat types abutting a natural area with potential for landward migration. • Increases representation of unvegetated, low energy mudflat and sandy habitat types.
Proposed Identifier	**MNP30 – Carland Creek**
Proposal	**Extend existing MNP27** to the north to include the inlet on the northern side of Teebean Point.
Total area	3km^2
Current zoning	Existing MNPZ with proposed extension over CPZ
Justification	• Protects a 3km^2 representative area of shallow water estuarine habitats (saltmarsh, claypan, mudflats, mangroves, and sand bar habitats) at the southern extent of the marine park. • Protects the connectivity between these habitats and provides a representative example of (and refuge for) the flora and fauna species associated with these shallow estuarine habitat types. • Directly adjoins the Great Sandy National Park, providing integrated national park status and protection area across the marine and terrestrial interface. • Overlays part of the Tin Can Inlet declared Fish Habitat Area. • Allows fishing to continue in the western side of the inlet • Avoids the Cooloola Cove area. • Allows for foreshore use and fishing adjacent to the camping area at Poverty Point. • Protects areas of vulnerable mangrove and saltmarsh habitat types abutting a natural area with potential for landward migration. • Increases representation of unvegetated, low energy mudflat, claypan and sandy habitat types.
Current MNPZs proposed to be removed	
Existing Identifier	**MNP05 – Gregory River**
Proposal	**Remove.**
Current zoning	MNPZ
Justification	Majority of MNPZ was mapped beyond upstream tidal limits, and into freehold land. Weir was included in MNPZ and area is significantly modified.
Existing Identifier	**MNP07 – Cherwell River**
Proposal	**Remove.**

Current zoning	MNPZ
Justification	Majority of MNPZ was mapped beyond tidal limits. MNPZ included railway bridge corridor. Current development not consistent with MNPZ.
Existing Identifier	**MNP08 – Burrum River**
Proposal	**Remove.**
Current zoning	MNPZ
Justification	MNPZ included area upstream of weir. Remaining area of MNPZ would be small and inefficient. Surrounding land use not conducive to expanding the MNPZ downstream.
Existing Identifier	**MNP21 – Unnamed Island, south-west of Turkey Island**
Proposal	**Remove.**
Current zoning	MNPZ
Justification	The close proximity of the proposed Bookar, Walsh, Turkey Islands MNPZ (proposed identifier MNP22) ensures estuarine habitat types in this area are protected.
Existing Identifier	**MNP22 – Garry's Anchorage**
Proposal	**Remove, subject to further discussion with BNTAC.**
Current zoning	MNPZ
Justification	Within a BNTAC Exclusive Use Area.

Conservation Park Zones

Note: Includes only Conservation Park Zones that are new or amended noting CPZ numbers may have changed.

Proposed Identifiers	**CPZ03 - Southern Gutter (was CPZ16)**	**CPZ22 – Great Sandy Strait at Gatakers Bay (was CPZ09)**
Proposal	**Retain current CPZ** but make minor changes to the shape of the zone.	
Current zoning	CPZ	
Justification	• Adjust boundary alignment to aid in compliance and enforcement.	
Proposed Identifier	**CPZ04 - Burnett Heads to Mon Repos**	
Proposal	**Create new CPZ.**	
Total area	3km^2	
Current zoning	HPZ	
Justification	• Protects areas adjacent to inshore fringing coral reef and rocky basalt foreshore habitat (boulder dominated rocky shores, intertidal and subtidal corals habitat types) along the Woongarra coastline of Hervey Bay. • Includes a critically important endangered loggerhead turtle nesting, inter-nesting and transit area. • Includes an important endangered green and flatback turtle nesting, inter-nesting and transit area.	
Proposed Identifier	**CPZ06 – Platypus Bay**	
Proposal	**Create new CPZ.**	
Total area	46km^2	
Current zoning	HPZ and GUZ	
Justification	• Protects 46km^2 of low energy beach and low energy subtidal sand habitat types in the north-eastern part of Hervey Bay/western side of K'gari. • Part of a key stopover and resting area for humpback whales, including mother-calf pairs utilising shallower, sheltered areas closer to shore, during their southern migration to Antarctica. • Includes habitat used by basking and transiting endangered loggerhead and vulnerable green turtles. • Includes an area of shoreline coffee rock habitat ~3km long. • Protects habitat integrity by allowing only limited extractive use.	

Proposed Identifier	**CPZ12 – West of Wathumba**	
Proposal	**Create new CPZ**	
Total area	7km^2	
Current zoning	HPZ and GUZ	
Justification	• Protects 7km^2 of subtidal gardens and sand habitat on the eastern side of Hervey Bay important for biodiversity and productivity of infauna. • Partially overlays the key Hervey Bay aggregation area for humpback whales. • Includes habitat used by transiting endangered loggerhead and vulnerable green turtles. • Protects habitat integrity by allowing only limited extractive use. • Limits impact on offshore trawl fishery.	
Proposed Identifier	**CPZ14 – Four Mile Reef**	
Proposal	**Create new CPZ.**	
Total area	70km^2	
Current zoning	HPZ and GUZ	
Justification	• Buffers and protects Four Mile Reef (MNP12), the only fully subtidal and deepest coral reef (10m below Lowest Astronomical Tide) within the marine park, in a highly protected zone type to reduce impacts from edge effects. • Buffers proposed MNP10 which is an important resting, transit and feeding area for vulnerable dugong and turtles. • Protects an area of seagrass (shallow and deep subtidal seagrass habitat) within western Hervey Bay.	
Proposed Identifiers	**CPZ15 - Coonarr Creek (was CPZ05)** **CPZ13 - Wathumba Creek (was CPZ12)**	**CPZ17 - Awinya Creek (was CPZ11)** **CPZ21- Coongul Creek (was CPZ10)**
Proposal	**Extend CPZ boundary offshore** by approximately 500m.	
Current zoning	HPZ	
Justification	• Incorporates the dynamic creek mouth areas in CPZ where natural accretion and erosion affects zone boundaries. • Provides for connectivity of habitats and movement of species across the mouths of these estuaries.	

Habitat Protection Zones

Note: Includes only Habitat Protection Zones that are new or amended.

Proposed Identifier	**HPZ01 – Flat Rock**		
Proposal	**Change** small area of CPZ to HPZ.		
Current zoning	CPZ		
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the zone. • Facilitates maintenance (with permission) of a public beach using beach nourishment at Flat Rock. • Maintains protection of habitats.		
Proposed Identifier	**HPZ02 – Northern K'gari** **HPZ05 – Platypus Bay (was HPZ03)**		
Proposal	**Expand existing HPZ** to buffer MNPZ and CPZs.		
Current zoning	GUZ and HPZ		
Justification	• Complements and buffers the existing MNPZ and proposed new CPZs. • Minimises impacts from edge effects. • Maintains protection of habitats and recognition of their value.		
Proposed Identifier	**HPZ03 - Bargara** **HPZ06 - Elliott Heads** **HPZ08 – Woodgate Beach** **HPZ08 – Burrum Heads**	**HPZ08 – Toogoom to Eli Waters** **HPZ15 - Maaroom** **HPZ17 - Boonooroo** **HPZ18 - Tuan**	**HPZ19 - Poona** **HPZ20 - Tinnanbar** **HPZ22 - Rainbow Beach** **HPZ23 - Tin Can Bay**
Proposal	**Change** small areas of CPZ to HPZ.		
Current zoning	CPZ		
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Facilitates local government or landholders to undertake (with permission) management actions including those required to address coastal erosion and/or climate change impacts such as beach nourishment and sand pushing. • Maintains protection of habitats.		

Proposed Identifier	**HPZ04 - Palmer Creek**
Proposal	**Change** small area of CPZ to HPZ within Palmer Creek and extending southwards down the coast on the landward side of MNP08 (Barolin Rock) to allow management of urban development.
Current zoning	CPZ
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Facilitates management (with permission) of urban development works, e.g. stormwater outlets. • Maintains protection of habitats.
Proposed Identifier	**HPZ11 - Cherwell & Burrum Rivers**
Proposal	**Change** partial area of CPZ to HPZ.
Current zoning	CPZ
Justification	• Private works proposed to be undertaken in the existing CPZ are generally not supported. • Alignment with declared Fish Habitat Area management is expected to provide improved certainty and less confusion for proponents as applications for private access structures are more likely to be supported in the proposed HPZ. • Maintains recognition of habitat value.
Proposed Identifier	**HPZ12 - Gatakers Bay**
Proposal	**Change** small area of CPZ to HPZ
Current zoning	CPZ
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Facilitates dredging (with permission) for improved access to the public boat ramp. • Maintains recognition of habitat value.
Proposed Identifier	**HPZ13 - Dayman Spit**
Proposal	**Change** small area of CPZ to HPZ.
Current zoning	CPZ
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Facilitates local government to undertake (with permission) sand extraction for beach nourishment to address climate change impacts. • Maintains recognition of habitat value.

Proposed Identifier	HPZ14 - Wanggoolba Creek
Proposal	**Change** small area of CPZ to HPZ.
Current zoning	CPZ
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Facilitates widening and deepening (with permission) of the channel for all tide access, including for emergency services. • Maintains recognition of habitat value.

General Use Zones

Note: Includes only General Use Zones that are new or amended.

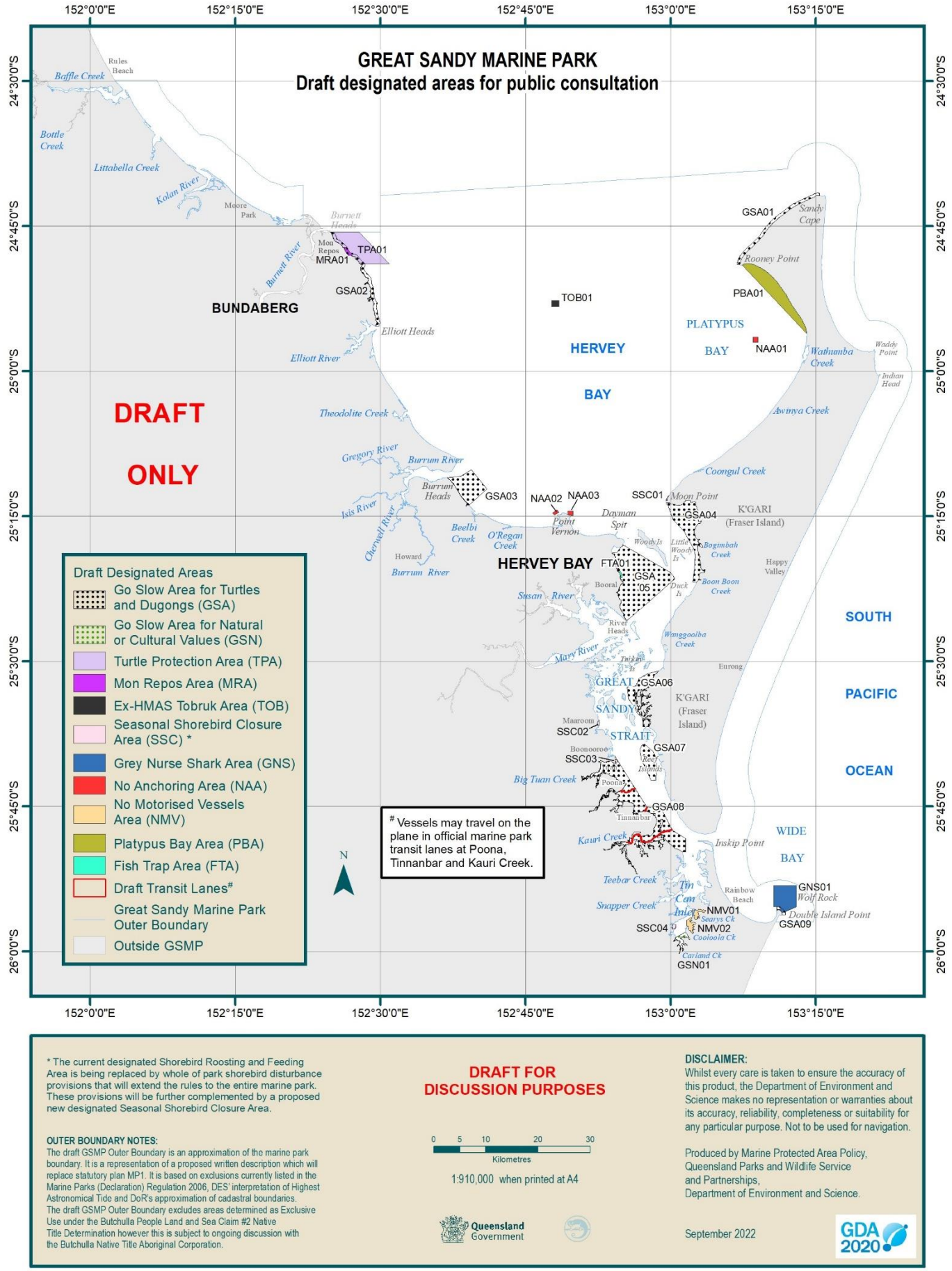
Proposed Identifiers	GUZ02 – Rosedale	GUZ09 - Elliott River
Proposal	**Change** small area of CPZ to GUZ.	
Current zoning	CPZ	
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Facilitates (with permission) aquaculture intake and outlet structures for land-based aquaculture operations. • Recognises existing declared Fish Habitat Area exclusions.	

Proposed Identifiers	GUZ03 - Winfield GUZ04 - Boaga	GUZ05 - Winfield East GUZ11 - Riverview South	GUZ12 - Walkers Point GUZ13 - Buxton
Proposal	**Change** small areas of CPZ to GUZ.		
Current zoning	CPZ		
Justification	• Amended zone boundaries align with exclusions from declared Fish Habitat Areas for substantially developed shorelines.		

Proposed Identifier	GUZ10 - Riverview North
Proposal	**Change** small area of CPZ to GUZ.
Current zoning	CPZ

Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Allows for maintenance works and possible future upgrade for Elliott Heads to Riverview water pipeline. • Amended zone boundary aligns with exclusion from declared Fish Habitat Areas for substantially developed shorelines.	
Proposed Identifiers	**GUZ15 - Hervey Bay foreshore**	**GUZ16 - Urangan**
Proposal	**Change** small areas of CPZ to GUZ.	
Current zoning	CPZ	
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Expanding width of GUZ allows for better management of coastal protection works.	
Proposed Identifier	**GUZ17 - Teewah Point**	
Proposal	**Change** small area of CPZ to GUZ.	
Current zoning	CPZ	
Justification	• Entry and use provisions for CPZ prohibit some works being undertaken in the existing zone. • Allows for maintenance works and possible future upgrade for power corridor supplying power to Rainbow Beach.	

Appendix 6. Draft zoning plan (designated areas)



* The current designated Shorebird Roosting and Feeding Area is being replaced by whole of park shorebird disturbance provisions that will extend the rules to the entire marine park. These provisions will be further complemented by a proposed new designated Seasonal Shorebird Closure Area.

OUTER BOUNDARY NOTES:
The draft GSMP Outer Boundary is an approximation of the marine park boundary. It is a representation of a proposed written description which will replace statutory plan MP1. It is based on exclusions currently listed in the Marine Parks (Declaration) Regulation 2006, DES' interpretation of Highest Astronomical Tide and DoR's approximation of cadastral boundaries. The draft GSMP Outer Boundary excludes areas determined as Exclusive Use under the Butchulla People Land and Sea Claim #2 Native Title Determination however this is subject to ongoing discussion with the Butchulla Native Title Aboriginal Corporation.

DRAFT FOR DISCUSSION PURPOSES

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Queensland Government

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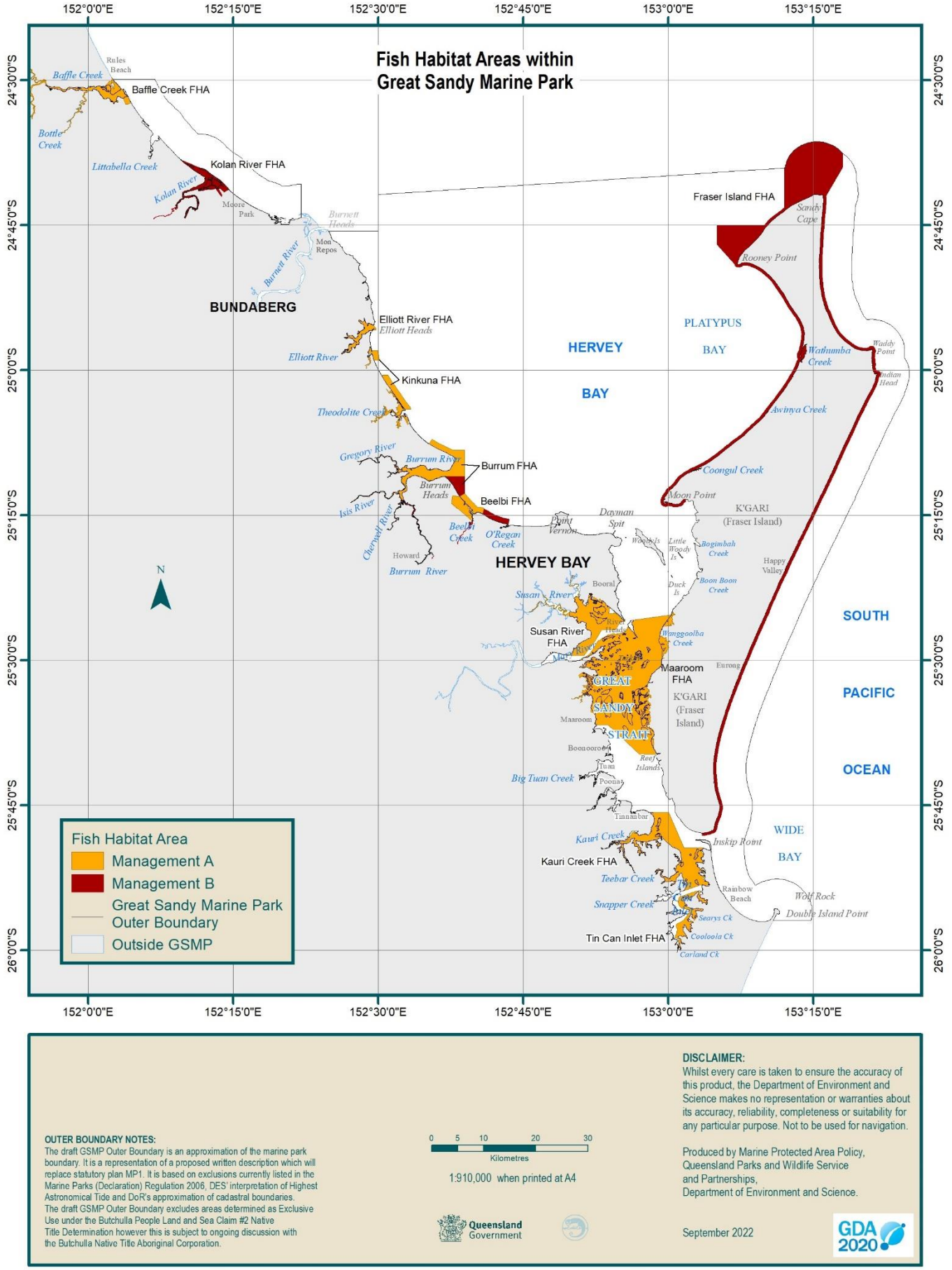
Produced by Marine Protected Area Policy, Queensland Parks and Wildlife Service and Partnerships, Department of Environment and Science.

September 2022

GDA 2020

Appendix 7. Declared Fish Habitat Areas in Great Sandy Marine Park



Appendix 8. Contribution of MNP zones and designated areas to international and national environmental conventions and plans.

International Environmental Obligations	Draft Marine National Park Zone																													
	MNP01	MNP02	MNP03	MNP04	MNP05	MNP06	MNP07	MNP08	MNP09	MNP10	MNP11	MNP12	MNP13	MNP14	MNP15	MNP16	MNP17	MNP18	MNP19	MNP20	MNP21	MNP22	MNP23	MNP24	MNP25	MNP26	MNP27	MNP28	MNP29	MNP30
Convention on Wetlands of International Importance (Ramsar Convention) – Great Sandy Strait Ramsar Site																*		*	*	*	*	*	*	*	*		*	*	*	*
Convention for the Protection of the World Cultural and Natural Heritage (World Heritage Convention) – Fraser Island World Heritage Area		*	*			*							*					*												
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) – MoU for conservation of dugong		*	*			*	*			*	*		*	*								*	*							
Bonn Convention - Single Species Action Plan for the Loggerhead Turtle		*	*	*	*	*		*					*							*		*								
Japan-Australia Migratory Bird Agreement (JAMBA)	*													*				*	*	*	*	*	*					*		
China-Australia Migratory Bird Agreement (CAMBA)	*													*				*	*	*	*	*	*					*		
Republic of Korea-Australia Migratory Bird Agreement (RoKAMBA)	*													*				*	*	*	*	*	*					*		

National recovery plan / conservation advice	Draft Marine National Park Zone																												
	MNP01	MNP02	MNP03	MNP04	MNP05	MNP06	MNP07	MNP08	MNP09	MNP10	MNP11	MNP12	MNP13	MNP14	MNP15	MNP16	MNP17	MNP18	MNP19	MNP20	MNP21	MNP22	MNP23	MNP24	MNP25	MNP26	MNP27	MNP28	MNP29	MNP30
Recovery Plan for marine turtles in Australia 2017 - 2027		*	*	*	*	*		*		*	*		*					*		*		*	*		*	*				
Australian National Recovery Plan for the Grey nurse Shark EPBC Act 1999 Conservation Advice – Grey nurse shark																										*				
Australian National Recovery Plan for the Water mouse (false water rat)																				*			*	*			*	*		
EPBC Act 1999 - Wildlife Conservation Plan for Migratory Shorebirds																		*	*	*	*	*	*					*		
EPBC Act 1999 Conservation Advice – Eastern Curlew	*														*			*	*	*	*	*	*					*		
EPBC Act 1999 Conservation Advice – Curlew Sandpiper																		*	*		*	*								
EPBC Act 1999 Conservation Advice – Australian Painted Snipe																					*									

Environmental Obligation	Proposed designated area type				
	Go Slow Area for turtles and dugong	Grey nurse shark area	Mon Repos Area	Seasonal shorebird closure area	Turtle protection area
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) – MoU for conservation of dugong	*				
Bonn Convention - Single Species Action Plan for the Loggerhead Turtle	*		*		*
Japan-Australia Migratory Bird Agreement (JAMBA).				*	
China-Australia Migratory Bird Agreement (CAMBA).				*	
Republic of Korea-Australia Migratory Bird Agreement (RoKAMBA).				*	
Recovery Plan for marine turtles in Australia 2017 - 2027	*		*		*
Australian National Recovery Plan for the Grey nurse Shark & EPBC Act 1999 Conservation Advice		*			
EPBC Act 1999 - Wildlife Conservation Plan for Migratory Shorebirds				*	
EPBC Act 1999 Conservation Advice – Eastern Curlew				*	
EPBC Act 1999 Conservation Advice – Curlew Sandpiper				*	

Appendix 9. Outline of draft provisions for a revised Marine Parks (Great Sandy) Zoning Plan

NOTE: This Appendix provides an outline of provisions, based on the preferred options as discussed in section 6, that would be used to inform the drafting of legislation by the Office of the Queensland Parliamentary Counsel, subject to feedback on the Consultation Regulatory Impact Statement.

A summary of the status and proposed changes to the Marine Parks (Great Sandy) Zoning Plan 2017 provisions is provided in Appendix 10.

References to latitude and longitude use datum GDA2020.

General use zone

Entry or use without permission

The general use zone may be used or entered without permission for any of the following purposes:

(a) to carry out a low impact activity not involving fishing or collecting;

(b) to carry out any of the following fishing or collecting activities—
- (i) bait gathering;
- (ii) crabbing;
- (iii) limited collecting;
- (iv) line fishing using not more than 3 hand-held rods or handlines, for each person, with not more than 6 hooks in total for each person;
- (v) limited spearfishing;
- (vi) netting, including bait netting;
- (vii) oyster gathering;
- (viii) fishing or collecting for an accredited harvest fishery in compliance with any requirements applying to the accreditation;
- (ix) trawling;
- (x) trolling;

(c) to carry out a traditional use of marine resources that—
- (i) includes another activity permitted under this section; or
- (ii) is carried out in a way provided for under an accredited traditional use of marine resources agreement, including any conditions or requirements applying under the agreement;

(d) to carry out a limited media activity;

(e) to carry out limited impact research (extractive) or limited impact research (non-extractive);

(f) to conduct a limited educational program;

(g) to anchor a vessel in a particular area in the zone for not more than-
- (i) 14 consecutive days; or
- (ii) 30 days in any period of 60 days;

(h) to navigate a vessel or aircraft, other than a ship or a managed vessel or aircraft, if any equipment normally used for fishing or collecting is stowed or secured when the vessel or aircraft is in an area of the zone in which the use of the equipment is not authorised under the Act.

Entry or use with permission

1. The written permission of the chief executive is required to use or enter the general use zone for any of the following purposes:

a) to carry out fishing or collecting, other than a fishing or collecting activity that can be conducted without permission, for any of the following purposes—
- (i) for a harvest fishery, other than an accredited harvest fishery;
- (ii) for a developmental fishery program;
- (iii) collecting other than limited collecting;

(b) to carry out a traditional use of marine resources, other than a traditional use of marine resource that can be conducted without permission;

(c) to conduct an aquaculture operation (other than an aquaculture operation that involves the addition of feed);

d) to operate a fishing industry service vessel;

(e) to conduct a tourism program;

(f) to carry out research, other than limited impact research (extractive) or limited impact research (non-extractive);

(g) to engage in an educational program, other than a limited educational program;

(h) to carry out a media activity other than a limited media activity;

(i) to conduct a vessel or aircraft charter operation;

(j) to anchor a vessel in a particular area in the zone for more than—
- (i) 14 consecutive days; or
- (ii) 30 days in any period of 60 days;

(k) to navigate a ship or a managed vessel or aircraft;

(l) to operate a facility for a purpose (other than the use of a vessel that can be undertaken without permission, consistent with the objects for the general use zone, including, for example, by carrying out any of the following—
- (i) discharging waste from the facility;
- (ii) building, assembling, fixing in position, maintaining or demolishing the facility;
- (iii) constructing or operating mooring facilities for vessels or aircraft;
- (iv) operating a landing area or facility for aircraft;

(m) to carry out works for a purpose consistent with the objects for the general use zone, including, for example, any of the following—
- (i) dredging;
- (ii) dumping of spoil;
- (iii) reclamation;
- (iv) beach protection works;
- (v) harbour works;

(n) to carry out a program for taking a plant or animal that poses a threat to—
- (i) human life or safety; or

(ii) the marine park's marine ecosystems; or
(iii) the use or amenity of an area in, or adjacent to, the marine park;

(o) to explore for or mine for minerals, if the person is the holder of a lease, licence, permit or other authority under the *Mineral Resources Act 1989* that authorises the exploration or mining;

(p) to explore for or produce petroleum, if the person is the holder of a lease, licence, permit or other authority under the *Petroleum and Gas (Production and Safety) Act 2004* or the *Petroleum Act 1923* that authorises the exploration or production;

(q) to carry out geothermal exploration, if the person is the holder of a permit under the *Geothermal Energy Act 2010* that authorises the exploration;

(r) any other purpose consistent with the objects for the general use zone.

Habitat protection zone

Entry or use without permission

The habitat protection zone may be used or entered without permission for any of the following purposes:

(a) to carry out a low impact activity not involving fishing or collecting;

(b) to carry out any of the following fishing or collecting activities—
(i) bait gathering;
(ii) crabbing;
(iii) limited collecting;
(iv) line fishing using not more than 3 hand-held rods or handlines, for each person, with not more than 6 hooks in total for each person;
(v) limited spearfishing;
(vi) netting, including bait netting;
(vii) oyster gathering;
(viii) fishing or collecting for an accredited harvest fishery in compliance with any requirements applying to the accreditation;
(ix) trolling;

(c) to carry out a traditional use of marine resources that—
(i) includes another activity permitted under this section; or
(ii) is carried out in a way provided for under an accredited traditional use of marine resources agreement, including any conditions or requirements applying under the agreement;

(d) to carry out a limited media activity;

(e) to carry out limited impact research (extractive) or limited impact research (non-extractive);

(f) to conduct a limited educational program;

(g) to anchor a vessel in a particular area in the zone for not more than-
(i) 14 consecutive days; or
(ii) 30 days in any period of 60 days;

(h) to navigate a vessel or aircraft, other than a ship or a managed vessel or aircraft, if any equipment normally used for fishing or collecting is stowed or secured when the vessel or aircraft is in an area of the zone in which the use of the equipment is not authorised under the Act.

Entry or use with permission

1. The written permission of the chief executive is required to use or enter the habitat protection zone for any of the following purposes:

(a) to carry out fishing or collecting, other than fishing or collecting activity that can be conducted without permission, for any of the following purposes—
(i) for a harvest fishery, other than an accredited harvest fishery;
(ii) for a developmental fishery program;
(iii) collecting other than limited collecting;

(b) to carry out a traditional use of marine resources, other than a traditional use of marine resources conducted without permission;

(c) to conduct an aquaculture operation (other than an aquaculture operation that involves the addition of feed);

(d) to operate a fishing industry service vessel;

(e) to conduct a tourism program;

(f) to carry out research, other than limited impact research (extractive) or limited impact research (non-extractive);

(g) to engage in an educational program, other than a limited educational program;

(h) to conduct a media activity other than a limited media activity;

(i) to conduct a vessel or aircraft charter operation;

(j) to anchor a vessel in a particular area in the zone for more than—
(i) 14 consecutive days; or
(ii) 30 days in any period of 60 days;

(k) to navigate a ship or a managed vessel or aircraft;

(l) to operate a facility for a purpose (other than the use of a vessel for a purpose that does not require permission, consistent with the objects for the habitat protection zone, including, for example, by carrying out any of the following—
(i) discharging waste from the facility;
(ii) building, assembling, fixing in position, maintaining or demolishing the facility;
(iii) constructing or operating mooring facilities for vessels or aircraft;
(iv) operating a landing area or facility for aircraft;

(m) to carry out works for a purpose consistent with the objects for the habitat protection zone, including, for example, any of the following—
(i) dredging;
(ii) dumping of spoil;
(iii) reclamation;
(iv) beach protection works;
(v) harbour works;

(n) to carry out a program for taking a plant or animal that poses a threat to—
(i) human life or safety; or
(ii) marine ecosystems of the marine park; or
(iii) the use or amenity of an area in the marine

park or an area adjacent to the marine park;

(o) to explore for or mine for minerals, if the person is the holder of a lease, licence, permit or other authority under the *Mineral Resources Act 1989* that authorises the exploration or mining;

(p) to explore for or produce petroleum, if the person is the holder of a lease, licence, permit or other authority under the *Petroleum and Gas (Production and Safety) Act 2004* or the *Petroleum Act 1923* that authorises the exploration or production;

(q) to carry out geothermal exploration, if the person is the holder of a permit under the *Geothermal Energy Act 2010* that authorises the exploration;

(r) any other purpose consistent with the objects for the habitat protection zone.

Conservation park zone

Entry or use without permission

The conservation park zone may be used or entered without permission for any of the following purposes:

(a) to carry out a low impact activity not involving fishing or collecting;

(b) to carry out any of the following fishing or collecting activities—
- (i) bait gathering;
- (ii) bait netting;
- (iii) limited collecting;
- (iv) limited crabbing;
- (v) limited line fishing;
- (vi) limited spearfishing;
- (vii) oyster gathering;
- (viii) fishing or collecting for the aquarium fish fishery, or the beachworm fishery, in compliance with any requirements applying to its accreditation as an accredited harvest fishery;
- (ix) limited trolling;

(c) to carry out a traditional use of marine resources that—
- (i) includes another activity permitted under this section; or
- (ii) is carried out in a way provided for under an accredited traditional use of marine resources agreement, including any conditions or requirements applying under the agreement;

(d) to carry out a limited media activity;

(e) to carry out limited impact research (extractive) or limited impact research (non-extractive);

(f) to conduct a limited educational program;

(g) to anchor a vessel in a particular area in the zone for not more than-
- (i) 14 consecutive days; or
- (ii) 30 days in any period of 60 days;

(h) to navigate a vessel or aircraft, other than a ship or a managed vessel or aircraft, if any equipment normally used for fishing or collecting is stowed or secured when the vessel or aircraft is in an area of the zone in which the use of the equipment is not authorised under the Act.

(2) In this section—

limited line fishing means fishing using no more than 2 hand-held fishing rods or handlines for each person, with no more than 2 hooks in total for each person.

limited trolling means fishing with a line or lines trailed from a vessel that is underway, using no more than 2 lines for each person on the vessel, with no more than 2 hooks in total for each person.

Entry or use with permission

The written permission of the chief executive is required to use or enter the conservation park zone for any of the following purposes:

(a) fishing or collecting in the aquarium fish fishery or the beachworm fishery;

(b) to carry out a traditional use of marine resources other than a traditional use of marine resources that can be conducted without permission;

(c) to conduct an aquaculture operation (other than an aquaculture operation that involves the addition of feed);

(d) to operate a fishing industry service vessel;

(e) to conduct a tourism program;

(f) to carry out research, other than limited impact research (extractive) or limited impact research (non-extractive);

(g) to engage in an educational program, other than a limited educational program;

(h) to conduct a media activity other than a limited media activity

(i) to conduct a vessel or aircraft charter operation;

(j) to anchor a vessel in a particular area in the zone for more than—
- (i) 14 consecutive days; or
- (ii) 30 days in any period of 60 days;

(k) to navigate a ship or a managed vessel or aircraft;

(l) to operate a facility for a purpose (other than the use of a vessel for a purpose that does not require permission) consistent with the objects for the conservation park zone, including, for example, by carrying out any of the following—
- (i) discharging waste from the facility;
- (ii) building, assembling, fixing in position, maintaining or demolishing the facility;
- (iii) constructing or operating mooring facilities for vessels or aircraft;
- (iv) operating a landing area or facility for aircraft;

(m) to carry out works for a purpose consistent with the objects for the conservation park zone;

(n) to carry out a program for taking a plant or animal that poses a threat to—
- (i) human life or safety; or
- (ii) marine ecosystems of the marine park; or
- (iii) the use or amenity of an area in the marine park or an area adjacent to the marine park;

(o) any other purpose consistent with the objects for

the conservation park zone.

Marine national park zone

Entry or use without permission

The marine national park zone may be used or entered without permission for any of the following purposes:

(a) to carry out a low impact activity not involving fishing or collecting;
(b) to carry out a traditional use of marine resources that—
  (i) includes another activity permitted under this section; or
  (ii) is carried out in a way provided for under an accredited traditional use of marine resources agreement, including any conditions or requirements applying under the agreement;
(c) to carry out a limited media activity;
(d) to carry out limited impact research (non-extractive);
(e) to carry out a limited educational program;
(f) to anchor a vessel in a particular area in the zone for not more than-
  (i) 14 consecutive days; or
  (ii) 30 days in any period of 60 days;
(g) to navigate a vessel or aircraft, other than a ship or a managed vessel or aircraft, if any equipment normally used for fishing or collecting is stowed or secured when the vessel or aircraft is in an area of the zone in which the use of the equipment is not authorised under the Act.

Entry or use or entry with permission

1. The written permission of the chief executive is required to use or enter the marine national park zone for any of the following purposes:

(a) to carry out a traditional use of marine resources other than a traditional use of marine resources that can be conducted without permission;
(b) to operate a fishing industry service vessel;
(c) to conduct a tourism program;
(d) to carry out research, other than limited impact research (non-extractive), that the chief executive decides—
  (i) is relevant to, and a priority for, the management of the marine park; or
  (ii) can not reasonably be conducted elsewhere;
(e) to conduct an educational program, other than a limited education program;
(f) to conduct a media activity other than a limited media activity;
(g) to conduct a vessel or aircraft charter operation;
(h) to anchor a vessel in a particular area in the zone for more than—
  (i) 14 consecutive days; or
  (ii) 30 days in any period of 60 days;
(i) to navigate a ship or a managed vessel or aircraft;
(j) to operate a facility for a purpose (other than the use of a vessel or aircraft for a purpose that does not require permission) consistent with the objects for the marine national park zone, including, for example, by carrying out any of the following—
  (i) discharging waste from the facility;
  (ii) building, assembling, fixing in position, maintaining or demolishing the facility;
  (iii) constructing or operating mooring facilities for vessels or aircraft;
  (iv) operating a landing area or facility for aircraft;
(k) to carry out works for a purpose consistent with the objects for the marine national park zone;
(l) to carry out a program for taking a plant or animal that poses a threat to—
  (i) human life or safety; or
  (ii) marine ecosystems of the marine park; or
  (iii) the use or amenity of an area in the marine park or an area adjacent to the marine park;
(m) any other purpose consistent with the objects for the marine national park zone.

Designated areas

The following designated areas are set aside for special management:

1. Ex-HMAS Tobruk area;
2. Fish trap areas
3. Go slow areas for turtles and dugongs
4. Grey nurse shark area
5. Mon Repos area
6. Turtle protection area
7. Seasonal Shorebird closure areas
8. Platypus Bay area
9. No anchoring areas
10. Go slow areas for natural and cultural values
11. No motorised vessels area

Ex-HMAS Tobruk Area

The purpose of the ex-HMAS Tobruk Area is to manage and maintain the wreck of the ex-HMAS Tobruk while providing safe opportunities for public appreciation, understanding and enjoyment of the area and minimising harm or distress to the marine resources of the area caused by the entry and use of the area.

A person must not enter the ex-HMAS Tobruk area unless they have permission or authority under a commercial activity agreement. While in the ex-HMAS Tobruk area a person must not carry out fishing or collecting or interfere with the wreck of the ex-HMAS Tobruk unless they have a permission to do so.

Fish trap areas

To conserve important indigenous sites from anchor damage and removal of material.

Within a fish trap area a person must not:-

- anchor a vessel; or
- excavate, modify or remove material from the area; or
- conduct an activity that may impact on the

integrity and cultural values of the area.

Go slow areas for turtles and dugongs
The purpose of the go slow area is to protect turtles and dugongs from boat strike in critical feeding and resting areas.

A person must not, in a go slow area:
- operate a motorised vessel in a planing or non-displacement mode; or
- undertake motorised watersports; or
- operate a motorised vessel at a speed greater than 6 knots.

The go slow area rules apply to the area along the Woongarra Coast between the start of 15 October each year and the end of 30 April the following year.

Persons undertaking authorised surf life saving activities along the Woongarra coast will be exempt from the go slow area special management provisions with permission.

Grey nurse shark area
The purpose of the grey nurse shark area is to protect grey nurse shark populations and their habitat and to minimise harm or distress caused directly or indirectly to grey nurse sharks by diving or other human activities.

Within a grey nurse shark area a person must not:-
- dive between 6pm and 6am
- touch or feed a grey nurse shark
- trap, or attempt to trap a grey nurse shark
- block a cave entrance or gutter
- use electro-acoustic or mechanical apparatus in the water
- interfere with a grey nurse shark's natural behaviour or
- be in a group of more than 10 divers, unless diving as part of a tourism program in which case no more than 12 persons can be in the group.

Mon Repos area
The purpose of the Mon Repos area is to provide for foreshore, inshore and near shore areas to be specially managed for the purposes of conservation of marine turtle rookeries, regulation of public access and promotion of turtle education and research.

Within the Mon Repos area from 15 October to 31 May a person must not:-
(a) use a vehicle in the area other than for monitoring or managing turtles; or
(b) bring a domestic animal into the area, or allow a domestic animal under the person's control to enter or use the area; or
(c) between 6p.m. and 6a.m.—
(i) enter the area unless the person is part of a QPWS Ranger guided tour or conducting research and monitoring; or
(ii) use an artificial light, other than 1 hand-held torch of not more than 3V or 100 lumens

Turtle protection area
To protect turtles and their habitat by minimising harm or distress caused directly or indirectly to turtles by trawling.

Trawling is prohibited within the area between 1 November and 31 January.

Seasonal shorebird closure areas
The purpose of the seasonal shorebird closure areas is to protect critical roost sites that are important for shorebirds, particularly migratory shorebirds during critical periods by minimising harm or distress caused directly or indirectly to shorebirds by human activities and domestic animals.

Between 1 September to 31 October and 1 March to 30 April each year a person must not enter a seasonal shorebird closure area without permission.

Recognised persons undertaking shorebird counts or authorised pest control activities, will be able to enter the area during the restricted period with authorisation.

Platypus Bay area
The purpose of the Platypus Bay area is to:-
- protect the natural integrity and values of relatively undisturbed, remote areas in the marine park;
- provide opportunities to appreciate, and create awareness and understanding of, the natural integrity and values of the areas; and
- to minimise harm or distress caused directly or indirectly to threatened marine species in particular by motorised water sports and aircraft.

A person must not, in the Platypus Bay area:-
- undertake motorised water sports; or
- take off, or land, a fixed wing aircraft or helicopter.

Commercial fishers undertaking a lawful commercial fishing activity such as seine netting will be exempt from the motorised water sports provisions.

No anchoring areas
The purpose of a no anchoring area is to protect sensitive habitats and species from anchor damage.

A person must not enter or use a no anchoring area for anchoring.

Go slow areas for natural and cultural values
The purpose of go slow areas for natural and cultural values is to help protect the natural integrity and cultural values of the marine park from the impacts of vessels while providing opportunities to appreciate, and create awareness and understanding of, the natural integrity and cultural values of the areas.

A person must not, in a go slow area for natural and cultural values operate a motorised vessel:-

- in a planing or non-displacement mode; or
- at a speed greater than 6 knots; or
- to undertake motorised water sports.

No motorised vessels area

The purpose of a no motorised vessel area is to protect the natural resources and cultural values of the area.

A person must not use a motorised vessel or vehicle in a no motorised vessel area.

Additional purposes for entry or use

Entry or use without permission or notification

A person may enter or use an area in the marine park, without a permission for the area and without notifying the chief executive, for any of the following purposes—

- if there is an emergency—
  (i) to investigate and respond to an emergency alert; or
  (ii) to save human life or avoid risk of injury to a person; or
  (iii) to deal with a threat of pollution to the marine environment under a law of the Commonwealth or a national emergency response arrangement in which the chief executive participates; or
  (iv) to locate or secure the safety of an aircraft, vessel or structure that is, or may be, endangered by stress of weather or by navigational or operational hazards; or
  (v) to remove or salvage a vessel or aircraft, or a section of a vessel or aircraft, or other wreck, that is wrecked, stranded, sunk or abandoned and poses a threat to the marine environment or safety;
- if the person is a traditional owner and the activity does not involve fishing or collecting—for the purposes of Aboriginal tradition or Island custom;
- to enforce a provision of an Act of the Commonwealth or the State by a person authorised under that Act, or another Act that provides for substantially the same matter as that Act, to enforce the Act;
- to carry out reconnaissance or surveillance for the Commonwealth or the State;
- to install, maintain, relocate or remove a sign for or about the *Fisheries Act 1994*;
- to undertake government geodetic, bathymetric or similar surveys;
- to construct, install, relocate, remove or service navigational aids, or their ancillary buildings or works, that are authorised under a law of the Commonwealth or the State, including the operation of vessels and aircraft for the purposes.

Entry or use without permission after notification

- A person may enter or use an area in the marine park for a listed purpose without permission after notifying the chief executive.
- The chief executive may, on receiving the notice, impose conditions on the entry or use.
- A person intending to enter or use an area in the marine park for any of the following reasons must give the chief executive a notice stating the person intends to enter or use the area for the purpose:-
  - to undertake urgent works on essential public services, that are authorised under a law of the Commonwealth, the State or a local government authority;
    Examples of essential public services—power, water, sewerage or communication systems
  - to deal with an emergency involving a serious threat to the environment, other than a threat mentioned previously;
  - to undertake works to maintain existing sandy beach access points, including use of sand from the beach, following damage from storm event;
  - if there is not an emergency—to remove or salvage a vessel or aircraft, or a section of a vessel or aircraft, or other wreck, that is wrecked, stranded, sunk or abandoned;
  - to undertake defence activities that would otherwise be activities that would require a permission under this plan;

- A person intending to enter or use an area in the marine park to undertake maintenance dredging for navigational purposes must give the chief executive notice stating the person intends to enter or use the area two months before the start of the entry or use.

Entry or use for non-conforming use with, and without permission

Permission is required to undertake a non-conforming use in a marine national park zone of the marine park. Non-conforming uses conducted in a conservation park zone do not require permission. Each non-conforming use is to be undertaken in accordance with the conditions set out in Schedule 1.

Provisions about accreditation of traditional use of marine resources agreement

Division 1 provides for the accreditation of a traditional use of marine resources agreement. This Division outlines the application process including what the chief executive must consider, conditions imposed on the agreement, associated changes to an accreditation and the procedure for amending, suspending or cancelling an accreditation. Division 2 provides for the giving and effecting of authorizations under accredited traditional marine resource use agreements.

No changes are proposed to the existing provisions for this division in the *Marine Parks (Great Sandy) Zoning Plan 2017*.

Requirements for considering applications for particular permissions

In addition to the criteria outlined in section 10 of the *Marine Parks Regulation 2017*, when considering an application for a permission the chief executive must have regard to:-

1. Any effect the proposed entry or use of the zone will have on the environment as a result of the marine park's natural hydrological pattern or natural coastal processes and
2. The cumulative impact on the marine park of the proposed entry or use of the zone and any other entry or use of the marine park, particularly the cumulative impact of small-scale developments for which an environmental impact statement is not required.

Restrictions applying to activities carried out in marine park

Bait netting

(1) A person may carry out bait netting in the marine park using only—
(a) for a recreational fisher under the *Fisheries (General) Regulation 2019*—a cast net, scoop net or seine net, complying with the *Fisheries Declaration 2019*, chapter 4, part 4; or
(b) for a commercial fisher—a cast net, or mesh net, complying with the *Fisheries (Commercial Fisheries) Regulation 2019*, schedule 4, part 7.

(2) A commercial fisher who is bait netting in the conservation park zone must not—
(a) take a relevant fish while bait netting; or
(b) possess a relevant fish taken in contravention of paragraph (a).

(3) For subsection (2)(a), a commercial fisher does not take a relevant fish while bait netting if—
(a) the fish is taken unintentionally; and
(b) the fisher does not allow the net containing the fish to be out of the water other than to immediately remove the fish from the net; and
(c) the fisher immediately releases the fish into water deep enough to allow the fish to escape.

(4) In this section—
commercial fisher means a commercial fisher under the *Fisheries (General) Regulation 2019*.
possess, a relevant fish, means—
(a) to have custody or control of the fish; or
(b) to have an ability or right to readily obtain custody or control of the fish.
relevant fish means a fish of any of the following species—
(a) bream of the genus *Acanthopagrus* or *Rhabdosargus*
(b) flathead of the genus *Platycephalus*;
(c) whiting of the genus *Sillago*.

Netting

A person must not use a commercial net, other than a bait net, within the Habitat Protection zone of the Cherwell River and the upper reaches of the Burrum River.

Crabbing

A person crabbing in the marine park may only use the following apparatus within the meaning of the *Fisheries (General) Regulation 2019*:-

- crab pots;
- collapsible traps;
- dillies

The apparatus must be used as required under the Fisheries Act 1994 and associated Regulations.

Fishing or collecting

- A person who is fishing or collecting in the marine park must not take or possess—
  - an animal or plant of a protected species; or
  - other than with a permission, a specimen of coral or an animal of a species mentioned in schedule 2, part 1; or
  - other than with a permission, more than two specimens of the same species, or a total of more than five specimens:
    - a fish of a species mentioned in schedule 2, part 2; or
    - a marine invertebrate, other than an excluded invertebrate, greater than 5mm in length.
- If a person takes or possesses an animal or plant of a species that is authorised to be taken under fisheries legislation—
  - the person must not take or possess more than the number of specimens authorised by that legislation to be taken or possessed; and
  - the taking or possessing must be in accordance with that legislation.

Limited crabbing

A person limited crabbing in the marine park may only use the following within the meaning of the *Fisheries (General) Regulation 2019*:-

- crab pots;
- collapsible traps;
- dillies.

A person who is limited crabbing in the marine park must not use, alone or in combination, more than a total of 4 crab pots, or dillies.

The activity must be undertaken in accordance with the *Fisheries Act 1994* and associated Regulations.

Limited impact research (extractive)

(1) A person installing or operating minor research aids for limited impact research (extractive) in the marine park must ensure the aids are installed or used in compliance with the following—

(a) not more than 10 stakes may be used for each research project;

(b) a stake must not protrude 300mm or more from the substrate;

(c) not more than 20 subsurface marker buoys may be used for each research project or for each location;

(d) a surface marker buoy or subsurface marker buoy must be attached by lines to—

(i) concrete nails driven into dead coral substrate; or

(ii) inverted U-shaped metal rods less than 6mm in diameter driven into sand;

(e) not more than 10 surface marker buoys may be used for each research project and for each location;

(f) if surface marker buoys are used, a researcher associated with the research project must be present at all relevant times at the location.

(2) In this section—

location means a discrete identified reef, or a continuous non-reef area of up to 10km^2.

Limited research sampling

(1) A person who is limited research sampling in the marine park must ensure the following for the sampling—

(a) any fishing or collecting is done—

(i) by hand; or

(ii) by the use of a hand-held implement that is not motorised or pneumatically or hydraulically operated; or

(iii) by the use of a minor research aid;

(b) explosives or chemicals are not used;

(c) a specimen of an animal of a species mentioned in schedule 2, part 1, is not taken;

(d) for each location and research project, not more than 5 specimens of fish or invertebrates mentioned in schedule 2, part 2, are taken in any 28 day period;

(e) a specimen of an animal species that is a protected species is not taken;

(f) not more than the following are taken for each research project in each year—

(i) 20L of wet sediment;

(ii) 100L of seawater.

(2) In this section—

location means a discrete identified reef, or a continuous non-reef area of up to 10km^2.

Limited spearfishing

(1) A person who is carrying out limited spearfishing in the marine park must not use any of the following—

(a) a power-head;

(b) a firearm;

(c) a light;

(d) underwater breathing apparatus, other than a snorkel.

(2) In this section—

power-head means a device that—

(a) contains an explosive charge; and

(b) may be attached to a spear or spear gun.

Other restrictions

Disturbing shorebirds

- A public entity exercising statutory powers in relation to the marine park must consult with the chief executive about any proposal or action by the entity that may affect the value of the marine park to shorebirds.
- A person must not::
  - operate an aircraft, remotely piloted aircraft or vessel through a group of shorebirds; or
  - drive a vehicle through a group of shorebirds; or
  - take a domestic animal into the marine park that is not controlled or restrained by the person in a way that prevents the animal from causing disturbance to shorebirds; or
  - do any other thing that intentionally or recklessly disturbs shorebirds.

  Note: In this section, a group of shorebirds means more than one shorebird.

Particular activities prohibited by regulatory notice

For the *Marine Parks Regulation 2017*, section 115(1)(b), any of the following activities carried out in or near an artificial reef in the marine park may be prohibited by a regulatory notice—

- scuba diving / surface supplied diving;
- snorkelling / free diving;
- spearfishing;
- charter fishing;
- fishing or collecting for commercial purposes;
- fishing or collecting for recreation;
- anchoring
- surface supplied air diving

artificial reef means any structure or material placed on the substrate, or on or under water, to—

- create, restore or enhance a habitat for plants or animals; or
- attract plants or animals; or
- provide a place for diving or fishing activities.

Schedule 1. Non-conforming uses

The following activities are non-conforming uses within the park.

Part of marine park	Non-conforming use	Requirement for permission	Conditions
Marine national park zone south-east of Little Woody Island	Aquarium fish fishery	Permission required	• taking in the relevant fishery in compliance with any requirements that apply to the taking under the *Fisheries Act 1994.* • use may only be continued by a person- a) that can demonstrate a history of collecting in the marine national park zone located at Little Woody Island since 31 August 2006 and b) who holds, or is acting under an authority to carry out aquarium fish collecting under the *Fisheries Act 1994*, while the authority is in force..
Marine national park zone north of Woody Island	Coral fishery	Permission required	• taking in the relevant fishery in compliance with any requirements that apply to the taking under the *Fisheries Act 1994* • take confined to the area bounded by the following coordinates: • Northern tip of Woody Island (at or about 25°16.371'S, 152°56.573'E) • 25°16.239'S, 152°56.224'E • 25°16.099'S, 152°56.4'E • 25°16.012'S, 152°55.701'E • 25°15.669'S, 152°56.266'E • use may only be continued- a) by a person who holds, or is acting under the authority of, authority to take permit number 1484 or 1470 under the *Fisheries Act 1994*, while the permit is in force and b) for the purpose of supplying coral specimens for display to the Reef World aquarium in Hervey Bay.
Conservation park zone located in- • Baffle Creek, • Elliott River, • Burrum River or • Great Sandy Strait and Tin Can Inlet south of a line defined by latitude 25º 17.56'S connecting the Urangan Boat Harbour and Woody Island, then south-easterly along the western edge of Woody Island and then a line of longitude 152º 59.58'E that connects Woody Island and K'gari adjacent to Moon Point.	Crab fishery	Permission not required	• taking in the relevant fishery in compliance with any requirements that apply to the taking under the *Fisheries Act 1994* • use may only be continued- (a) by a person who holds, or is acting under, an authority to carry out crabbing under the *Fisheries Act 1994*, while the authority is in force.

Conservation park zone in the Mary River	Set pocket net fishery (part of the N1 fishery)	Permission not required	• taking in the relevant fishery in compliance with any requirements that apply to the taking under the *Fisheries Act 1994* • take confined to waters in the Mary River from a line where longitude 152 51.76E intersects HAT on the northern bank to where longitude 152 52.03E intersects HAT on the southern bank, upstream to the limit of the marine park. • use may only be continued- (a) by a person who holds, or is acting under, an authority in the N1 net fishery using a set pocket net, under the *Fisheries Act 1994*, and (b) while the authority is in force.
Conservation park zone in Great Sandy Strait	Net (tunnel net – N10) fishery	Permission not required	• taking in the relevant fishery in compliance with any requirements that apply to the taking under the *Fisheries Act 1994* • use may only be continued- (a) by a person who holds, or is acting under an authority in the N10 net fishery, that is an authority to take fish in the tunnel net fishery in the Great Sandy Region under the *Fisheries Act 1994*, and (b) while the authority is in force.
Conservation park zone located in- • Baffle Creek, • Elliott River, • Burrum River or • Great Sandy Strait and Tin Can Inlet south of a line defined by a line of latitude 25^{o} 17.56'S that connects the Urangan Boat Harbour and Woody Island, then south-easterly along the western edge of Woody Island and then a line of longitude 152^{o} 59.58'E that connects Woody Island and K'gari adjacent to Moon Point.	Yabby fishery	Permission not required	• taking in the relevant fishery in compliance with any requirements that apply to the taking under the Fisheries Act 1994 • use may only be continued- (a) by a person who holds, or is acting under, authority number 1435 or 3464, that is an authority for taking marine yabbies in the yabby fishery under the *Fisheries Act 1994*, while the authority is in force.

Schedule 2. Species restricted for taking or possessing

Part 1 No specimens to be taken or possessed

A Invertebrates

Class	Species	Common name
Anthozoa	all	anemone corallimorpharian coral (hard, soft and black) seafan and sea pen
Hydrozoa	all	fire coral hydroid

B Plants

all species of plants

C Reptiles, birds and mammals

all species of reptiles, birds and mammals

D Sharks

Family	Genus	Species	Common name
Heterodontidae	*Heterodontus*	*galeatus*	crested Port Jackson shark
Odontaspididae	*Carcharias*	*taurus*	grey nurse shark

Part 2 Specimens to be taken or possessed subject to restrictions

A Fish

Family	Genus	Species	Common name
Acanthuridae	all	all	moorish idol surgeonfish unicornfish
Anomalopidae	all	all	flashlight fishes
Antennariidae	all	all	frogfishes doublefin frogfishes straightback frogfishes
Aploactinidae	all	all	velvetfishes
Apogonidae	all	all	cardinalfishes longfin pikes
Aulostomidae	all	all	trumpetfishes
Balistidae	all	all	leather jackets triggerfishes
Batrachoididae	*Batrachomoeus*	all	frogfishes
Batrachoididae	*Haplophryne*	all	frogfishes
Blenniidae	all	all	blennies
Callionymidae	all	all	dragonets
Caracanthidae	all	all	crouchers
Centriscidae	all	all	bellowfishes razorfishes
Chaetodontidae	all	all	butterflyfishes angelfishes Chaetodon reef fishes
Cirrhitidae	*Cirrhitichthys*	all	hawkfishes
Cirrhitidae	*Paracirrhites*	all	hawkfishes
Clinidae	all	all	weedfishes
Diodontidae	all	all	porcupine fishes
Eleotridae	all	All	gudgeons

Ephippidae	all	all	batfish
Fistulariidae	all	all	flutemouths
Gobiidae	all	all	gobies
Grammistidae	*Diploprion*	all	soapfishes
Grammistidae	*Grammistes*	all	soapfishes
Holocentridae	all	all	squirrelfishes
Labridae	All genera, other than the following—		
	Achoerodus (all species)		eastern blue groper western blue groper
	Bodianus frenchii		fox fish
	Bodianus perditio		gold spot pigfish
	Bodianus unimaculatus		eastern pigfish
	Cheilinus chlorourus		floral maori wrasse
	Choerodon (all species)		tuskfishes
	Epibulus insidiator		sling jaw wrasse
	Hemigymnus (all species)		thick lipped wrasse fiveband wrasse
	Hologymnosus (all species)		redback longface wrasse red slender wrasse ringed slender wrasse pastel slender wrasse pale slender wrasse
	Pseudolabrus (all species)		
Malacanthidae	all	all	sand tilefish
Microdesmidae	*Ptereleotris*	all	dartfish wormfish
Monacanthidae	*Pervagor*	all	leatherjacket
Monacanthidae	*Chaetodermis*	*penicilligerus*	tasselled leatherjacket
Monacanthidae	*Oxymonacanthus*	*longirostris*	harlequin filefish
Monacanthidae	*Paraluteres*	*prionurus*	blacksaddle filefish
Monocentridae	*Cleidopus*	*gloriamaris*	Australian pineapple fish
Muraenidae	*Gymnothorax*	all	moray eel
Muraenidae	*Echidna*	all	moray eel
Muraenidae	*Siderea*	all	moray eel
Ophichthidae	all	all	snake eel
Ostraciidae	*Ostracion*	all	box fish
Ostraciidae	*Lactoria*	all	box fish
Ostraciontidae	all	all	box fish cowfish turretfish
Pataecidae	*Pataecus*	*fronto*	red Indian fish
Pegasidae	all	all	dragonfish seamoths
Plesiopidae	all	all	prettyfins
Pomacanthidae	all	all	angelfish
Pomacentridae	all	all	damselfish
Priacanthidae	all	all	bigeye
Pseudochromidae	all	all	dottyback dottyback
Scorpaenidae	All genera, other than the following—		
	Scorpaena incisipinnis		butterfly cod
	Neosebastes (all species)		lionfish or red firefish
Scorpaenidae	*Dendrochirus*	all	dwarf lionfish
Serranidae	*Epinephelus*	*lanceolatus*	Queensland groper
Serranidae	*Epinephelus*	*tauvina*	greasy cod

			estuary cod
Siganidae	all	all	rabbitfish
Synanceidae	all	all	stonefish
Syngnathidae	all	all	pipefish seahorse
Tetraodontidae	*Arothron*	all	pufferfishes toadfishes
Tetraodontidae	*Canthigaster*	all	pufferfishes
Tripterygiidae		all	threefins triplefins
Zanclidae	*Zanclus*	*cornutus*	moorish idol

B Invertebrates

All species of marine invertebrates over 5mm in length, other than the following—
Family Nereidae (bait worms)
Family Eunicidae (bait worms)
Family Panuliridae, other than *Stenopus hispidus* (crayfish and shrimps)
Family Penaeidae (prawns)
Family Scyllaridae (mud crabs and Moreton Bay bugs)
Family Portunidae (sand crabs)
Family Raninidae (spanner crabs)
Family Grapsidae (rock crabs)
Family Xanthidae (rock crabs)
Family Anomura (hermit crabs and yabbies)
Family Ocypodidae (ghost crabs)
Family Mictyridae (soldier crabs)
Family Alpheidae (clicking shrimps)
Class Stomatopoda (mantis shrimps)
Family Ostreidae (oysters)
Family Amusidae, species *Plebidonax deltoides* (eugaries or pippies)
Family Mytilidae (mussels)
Family Arcidae (cockles)
Family Onuphidae
Family Phyllodocidae

C Marine resources

coral limestone
sea shells
shell grit
star sand

Schedule 3. Dictionary

accredited harvest fishery means a harvest fishery accredited by the chief executive under the *Marine Parks Regulation 2017*.

accredited traditional use of marine resources agreement means a traditional use of marine resources agreement accredited by the chief executive.

aircraft means an aircraft under the *Marine Parks Regulation 2017*, schedule 6.

anchoring **i**ncludes equipment consisting of an anchor, anchor chain and attached tackle, whether or not the equipment is attached to a vessel

aquaculture operation-
1 An *aquaculture operation* is an operation for propagating, rearing, keeping, growing or breeding an aquatic plant or animal, including a fish, crustacean, reptile or mollusc, or other marine product.

2 An *aquaculture operation* includes:-
(i) the collection of wild species and the introduction of animals and animal husbandry;
(ii) the generation, release or treatment of chemicals, waste or other pollutants;
(iii) the harvesting or removal, other than by trawling, of an aquaculture product;
(iv) the construction, operation, maintenance, modification, demolition or removal of any structure associated with an activity mentioned in paragraph 1.

area restrictions, for the grey nurse shark area, means any restrictions on diving activities applying in the area under—
(a) the special management provisions of the designated grey nurse shark area ; or
(b) a declaration of a restricted access area under the *Marine Parks Regulation 2017*, section 119; or
(c) a prohibited area notice.

bait gathering means taking, in compliance with the *Fisheries Act 1994*, crabs, eugaries, worms or yabbies by hand or by a hand-held implement, other than as part of a harvest fishery.

defence activities means activities for defence purposes—
(a) conducted by the Australian Defence Force; or
(b) conducted by an arm of the defence forces of another country that is in Australia with the approval of the Commonwealth Government; or
(c) conducted or authorised by the Commonwealth Department of Defence.

designated area means a designated area established under the zoning plan.

developmental fishery program means a program of fishing or collecting, other than a program of collecting coral that—
(a) uses equipment or techniques not previously used in a commercial fishery, within the meaning of the *Fisheries (General) Regulation 2019*, in the marine park; or
(b) targets, either wholly or in part, a species for which there is no commercial fishery in the marine park.

dive club means an entity that facilitates, organises or coordinates diving activities for its members.

educational program means the provision, whether as a single act or a series of acts, of transport, accommodation or services for a group of 6 or more persons, none of whom is a tourist, principally for the purpose of systematically educating those persons.

expired zoning plan means the expired *Marine Parks (Great Sandy) Zoning Plan 2006* as in force immediately before the commencement.

explosive see the *Explosives Act 1999*, schedule 2.

facility includes—
(a) a building, structure or vessel; and
(b) equipment, goods or services.

fisheries legislation means any of the following—

(a) the *Fisheries Act 1994*;
(b) a regulation or declaration under the *Fisheries Act 1994*.

fishing industry service vessel means a vessel that provides fuel, goods Or services to, or carries products for, a commercial fishing operation in the marine park.

fishing or collecting means the taking, or attempted taking of, an animal, plant or marine product.

Great Sandy Marine Park see the *Marine Parks (Declaration) Regulation 2006*, section 10.

group, of divers, means a number of persons associated in any way through diving activities.
Examples—
- persons who are members of the same dive club
- persons diving from the same boat
- persons who are clients of the operator of a tourism program

harvest fishery means a harvest fishery under the *Marine Parks Regulation 2017*, schedule 6.

holder, of an accreditation of a traditional use of marine resources agreement, means each member of the traditional owner group in whose name the application for the accreditation was made.

hook includes the following—
(a) a single-shanked double or treble hook;
(b) a lure that is an artificial bait with not more than 3 hooks attached to it;
(c) an artificial fly;
(d) a jig for taking squid;
(e) a ganged hook set, consisting of not more than 6 hooks, each of which is in contact with at least 1 of the other hooks in the set;
(f) a bait jig that is a hook, or a group of hooks consisting of not more than 6 hooks, if the hook, or each of the group of hooks, is of a size between number 1 and number 12 (both inclusive) or an equivalent size.

hydrofoil means a motorised vessel that has plates or fins attached by struts fore and aft for lifting the hull clear of the water as speed is attained

limited collecting means collecting, in any 28 day period, not more than 5 specimens of an animal or plant of a species mentioned in schedule 2, part 2 —
(a) other than for a commercial purpose; and
(b) by hand or hand-held implement that is not motorised or pneumatically or hydraulically operated.

limited crabbing means crabbing in compliance with the *Fisheries Declaration 2019*, section 157 or the *Fisheries (Commercial Fisheries) Regulation 2019*, schedule 7, part 1 or 3.

limited educational program means an educational program not involving fishing or collecting.

limited impact research (extractive)—
1 *Limited impact research (extractive)* is research that is a component of—
(a) an educational program; or
(b) a project carried out for the purposes of research.
2 Research involving either or both of the following is also *limited impact research (extractive)*—
(a) fishing or collecting by limited research sampling;
(b) the installation or operation of minor research aids that do not pose a threat to safety or navigation.

limited impact research (non-extractive)—
1 *Limited impact research (non-extractive)* is research not involving fishing or collecting.
2 Subject to paragraph 1, *limited impact research (non-extractive)* includes the following—
(a) visual surveys, other than visual surveys of cetaceans;
(b) research not involving an activity that would, if it were not part of a research activity, require a permission;
(c) social research not involving the conduct of archaeological excavations.

limited media activity means the recording of images or sounds, including, for example, by photography, filming or sound recording, in a way that has, or is likely to have, negligible impact on the marine park.

limited research sampling means taking samples of marine resources only for purposes of research.

limited spearfishing—
1 *Limited spearfishing* is fishing with a spear or spear gun.
2 A person is not carrying out *limited spearfishing*—
(a) only because the person has a loaded spear gun for fishing in the person's possession out of the water; or
(b) if the person is engaging in spearfishing in any part of the marine park to which the *Fisheries Declaration 2019*, section 50 applies.
Low impact activity means an activity that is likely to have a negligible impact on the marine park.

managed vessel or aircraft means a vessel that is any of the following—
(a) a hovercraft;
(b) a wing in ground effect craft;
(c) a hydrofoil

media activity means the recording of images or sounds, including, for example, by filming, photographing or sound recording

minor research aid means any of the following—
(a) apparatus or equipment authorised under fisheries legislation for recreational use;
(b) a fish tag;
(c) a stake less than 12mm in diameter;
(d) a data logger for attachment to a marker buoy, bolt or dive weight;
(e) a non-fixed plankton net;
(f) a water sampling device or sediment sampling device, if the device is not motorised or pneumatically or hydraulically operated;
(g) a subsurface marker buoy less than 100mm in diameter;
(h) A surface marker buoy less than 200mm in diameter;
(i) a bolt or dive weight for attachment to a data logger.

mooring means
(a) a thing used, or intended to be used, in an area, for mooring a vessel, consisting of-
(i) a device attached to, or sitting on, the land in, or underlying, the area; and
(ii) a system involving cables, chains, ropes or other things attached to the device; and
(iii) a buoy, or other float on the surface of the water, attached to the system, that marks the location of the device and system; but
(b) does not include equipment that is part of a vessel.

motorised vessel means a vessel that is being propelled by an engine using an electric, biofuel, petrol or diesel fuel source.

motorised water sport means an activity involving any of the following—
(a) driving a motorised vessel other via the most direct reasonable route between departure point and destination location or in a navigation channel, including, for example—
(i) in a circular pattern; or
(ii) by weaving or diverting the vessel; or
(iii) by surfing down, or jumping over or across, any wave, swell or wash, other than for any necessary turn or diversion;
(b) towing a person behind a motorised vessel, including, for example, waterskiing or parasailing;

navigate includes moor, or anchor, or secure a vessel to a non-authorised structure in the course of navigation.

netting means netting carried out in compliance with fisheries legislation.

operator means a person who operates a tourism program involving diving in the grey nurse shark area.

oyster includes an oyster that is not in its shell.

oyster gathering means taking oysters in compliance with the *Fisheries Act 1994*.

possess, a thing, means—

(a) to have custody or control of the thing; or
(b) to have an ability or right to readily obtain custody or control of the thing.

prescribed matters, for a traditional use of marine resources agreement, means all of the following—
(a) the area of the marine park covered by the agreement;
(b) the names, or other identification, of the persons covered by the agreement;
(c) the name and address of a person to whom correspondence can be sent on behalf of the traditional owner group for which the agreement is made;
(d) a detailed description of the area and traditional use of marine resources covered by the agreement, including a description of the activities proposed to be undertaken at stated locations in the area;
(e) the animal species proposed to be harvested and, if the species include 1 or more protected species, how many of each protected species is proposed to be harvested;
(f) the management arrangements proposed by the traditional owner group for implementing the agreement, including the proposed role of the traditional owner group in ensuring compliance with the provisions of the agreement;
(g) the way in which the traditional use of marine resources is to be monitored and reported under the agreement, including the recording and reporting of information about the taking of protected species;
(h) a statement about the process used to develop the agreement by the traditional owner group, including, for example, any consultation with government authorities or interested persons;
(i) any other information the chief executive reasonably requires by written notice given to the traditional owner group for which the agreement is made.

prohibited area means the area to which a prohibited area notice applies.

prohibited area notice means a notice prohibiting either or both of the following—
(a) entry into the grey nurse shark area, or a stated part of the area;
(b) entry into the water in the grey nurse shark area or a stated part of the area.

protected species means—
(a) a listed marine species, listed migratory species or listed threatened species within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth); or
(b) a species of animal prescribed as protected wildlife under the *Nature Conservation Act 1992*; or
(c) an animal of the genus *Epinephelus*, other than *E. tukula* or *E. lanceolatus*, if the animal is more than 1m long.

relevant designated area,

relevant person, for a dive club that is not an incorporated entity, means a person who takes part in directing the club's diving activities.

representative Aboriginal/Torres Strait Islander body has the meaning given by the *Native Title Act 1993* (Cwlth).

ship—
1 A *ship* is a vessel that is—
(a) 50m or more in overall length; or
(b) an oil tanker, within the meaning given by the Protocol of 1978 relating to the 'International convention for the prevention of pollution from ships, 1973', regardless of its length; or
(c) a chemical carrier, or liquefied gas carrier, regardless of its length; or
(d) a ship to which the 'International code for the safe carriage of packaged irradiated nuclear fuel, plutonium and high-level radioactive wastes on board ships' (commonly known as the 'INF code') applies, regardless of its length; or
(e) adapted to carry oil or chemicals in bulk in cargo spaces; or
(f) engaged in towing or pushing another vessel if the other vessel is a ship under paragraph (a), (b), (c), (d) or (e), or, if the vessel is towing the other vessel, the total length of the tow, from the stern of the towing vessel to the after end of the tow, is greater than 150m.
2 However, a *ship* does not include—
(a) a vessel of the Defence Force; or
(b) a vessel of the armed service of another country, if the vessel is in Australian waters with the consent of Australia; or
(c) a vessel more than 50m in overall length used for private recreational activities.

shorebird includes all species within the order Charadriiformes

stowed and secured, for equipment used for fishing and collecting means-

(a) The equipment is not deployed and cannot be easily deployed for fishing or collecting activities and includes all rods, lines, hooks, nets, traps and all other fishing equipment.

For example

(i) no fishing equipment can be held by a person;
(ii) all fishing equipment should be unbaited and all lures secured back to the rod;
(iii) fishing rods should be placed in rod holders or inboard the vessel;
(iv) all fishing lines are secured back to the rod or reel; and
(v) no fishing equipment should be in the water.

(b) if the equipment is trawl fishing apparatus, means—

(i) that the nets are out of the water or that the fore ends of the nets are drawn up to the booms; and
(ii) that the otter boards are drawn up to the trawl blocks on the booms or are inboard a vessel; and
(iii) that the net's lazy lines are through the blocks; and
(iv) that the net's cod ends are open.

the marine park means the Great Sandy Marine Park.

tourism program means an activity, whether consisting of a single act or a series of acts, that—
(a) is carried out in the course of carrying on business; and
(b) is, or includes, the provision of transport, accommodation or services for tourists or for persons who include tourists.

tourist means a person who is in the marine park mainly for recreation, including, for example, recreational fishing or collecting.

traditional owner, for an area of the marine park, means a person of Aboriginal or Torres Strait Islander descent who—
(a) is recognised in the Aboriginal or Torres Strait Islander community generally, or by a representative Aboriginal/Torres Strait Islander body for an area that includes the area of the marine park—

(i) as having spiritual or cultural affiliations with the area of the marine park; or
(ii) as holding native title in relation to the area; and
(a) is entitled to undertake activities under Aboriginal tradition or Island custom in the area.

traditional owner group, for an area of the marine park, Means the group of traditional owners for the area who, in accordance with Aboriginal tradition or Island custom, speak for the area.

traditional use of marine resources means the undertaking of activities in an area of the marine park, in accordance with Aboriginal tradition or Island custom, to satisfy the personal, domestic or communal needs of a traditional owner for the area.

traditional use of marine resources agreement—
1 A *traditional use of marine resources agreement* is an agreement that—

(a) is prepared by a traditional owner group for an area of the marine park; and
(b) provides for the traditional use of marine resources in the area; and
(c) includes the prescribed matters for a traditional use of marine resources agreement.

2 However, an agreement does not fail to be a *traditional use of marine resources agreement* only because it does not contain all the prescribed matters.

trawling means trawling in compliance with the *Fisheries (Commercial Fisheries) Regulation 2019*, schedule 2.

trolling—
1 *Trolling* is fishing with a line or lines trailed behind a vessel that is under way—

(a) using not more than 3 lines for each person on the vessel; and
(b) with not more than 6 hooks in total for each person.

2 For paragraph 1, a vessel is under way only if it is being propelled through the water in a forward direction, whether by engine, sail or human power, and is not adrift.

turtle means a turtle of the family Chelondiidae or Dermochelydae and includes the turtle's egg and hatchling.

vessel or aircraft charter operation means an activity, whether consisting of a single act or a series of acts, involving a vessel or aircraft that—
(a) is available for charter or hire; and
(b) is being used in the course of carrying on a business that is, or includes, the provision of accommodation,

transport or services for a purpose other than an educational program or tourism program; and
(c) travels in or into the marine park; and
(d) is not merely transiting through the marine park by the most direct and reasonable route to a place outside the marine park.

wing in ground effect craft means a vessel constructed to move above the surface of the water using ground effect to lift off, land and maintain a limited altitude.

wreck includes derelict, flotsam and jetsam, lagan, and things of any kind that belonged to, came from, or were part of, a vessel or aircraft wrecked, stranded, sunk or abandoned, or in distress.

zone means a zone established under the zoning plan

Appendix 10. Summary of the status and proposed changes to the Marine Parks (Great Sandy) Zoning Plan 2017 provisions.

Component of zoning plan	Current zoning plan	Status / change
PRELIMINARY		
References to latitudes and longitudes	Part 1, Division 2	Geographic references will be updated to reflect use of new datum – GDA2020.
MARINE PARK ZONES		
Zones generally and their objects	Part 2, Division 2	The areas within each zone will be described with a “metes and bounds” description in a new schedule.
General Use Zone	Part 2, Division 3	• Reference to operation of a vessel or aircraft in the entry and use provisions, with and without permission, to be amended to “anchor a vessel”. • New provision – permission required to carry out a media activity, other than a limited media activity • Expansion and/or modification of existing GU zone boundaries.
Habitat Protection Zone	Part 2, Division 4	• Reference to operation of a vessel or aircraft in the entry and use provisions, with and without permission, to be amended to “anchor a vessel”. • New provision – permission required to carry out a media activity, other than a limited media activity • Expansion and/or modification of existing HP zone boundaries.
Conservation Park Zone	Part 2, Division 5	• Reference to operation of a vessel or aircraft in the entry and use provisions, with and without permission, to be amended to “anchor a vessel”. • New provision – permission required to carry out a media activity, other than a limited media activity • Definition of limited line fishing changed to use of two hand-held fishing rods or handlines for each person with no more than two hooks in total for each person. • Maximum penalty for using more than two hand-held lines and two hooks to be 100 penalty units. • Expansion and/or modification of existing CP zone boundaries. • Trolling replaced by limited trolling as an activity that can occur in the zone without permission. • Definition of limited trolling included - means fishing with a line or lines trailed from a vessel that is underway, using no more than 2 lines for each person on the vessel, with no more than 2 hooks in total for each person.

Component of zoning plan	Current zoning plan	Status / change
Buffer Zone	Part 2, Division 6	Zone type and corresponding entry and use provisions removed.
Marine National Park Zone	Part 2, Division 7	• Eight new MNP zones established. • Expansion of 13 existing MNP zones. • Removal of five existing MNP zones. • Reference to operation of a vessel or aircraft in the entry and use provisions, with and without permission, to be amended to “anchor a vessel”. • New provision – permission required to carry out a media activity, other than a limited media activity.
DESIGNATED AREAS		
Areas established for special management	Part 3, Division 2	The areas within each designated area will be described with a “metes and bounds” description in a new schedule.
Ex-HMAS Tobruk Area	Part 3, Division 3A	No changes to size of designated area or special management provisions.
Fish Trap Areas	Part 3, Division 4	• Fish trap at Woody Island removed as coordinates place the area outside of the marine park. • The five existing fish trap areas at Booral to be amalgamated into a single area. • No changes to special management provisions. • Maximum penalty for offences increased from 10 penalty units to 120 penalty units.
Go Slow Areas	Part 3, Division 5	• Renamed as “go slow area for turtles and dugong”. • One new go slow area to be established at Reef Islands in the Great Sandy Strait. • Expansion and/or modification of eight existing go slow areas. • The special management provisions will now apply to the Sandy Cape (northern end of K’gari) go slow area at all times, rather than seasonally. • Introduction of new special management provisions that apply to all go slow areas - vessels must not travel at a speed greater than 6 knots or conduct motorised water sports. • Surf Life Saving Clubs undertaking training activities, may be exempt from the special management provisions for go slow areas along the Woongarra Coast, with permission (new provision). • Maximum penalty for offences increased from 10 penalty units to 120 penalty units.
Great Sandy Area	Part 3, Division 6	• Existing designated area type and corresponding special management provisions removed and/or replaced with alternative arrangements. • Use of large mesh nets prohibited in Baffle Creek, Elliott River, Burrum River system, Great Sandy

Component of zoning plan	Current zoning plan	Status / change
		Strait and Tin Can Inlet. • Fishing in the commercial bloodworming fishery to be removed (prohibited in CP zones of Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet). • Fishing in the commercial tunnel net fishery and set pocket fishery to continue as non-conforming uses in the Great Sandy Strait and Mary River. • Fishing in the commercial yabby fishery, by persons holding the two specified DAF Authority numbers, to continue as a non-conforming use. • Line fishing in all CP zones restricted to maximum of two (2) handlines or rods and two (2) hooks per person.
Grey Nurse Shark Area	Part 3, Division 7	• Designated area expanded in size. • Requirement for tourism program operators and dive clubs to display a sign regarding area restrictions removed. • Clarification of dive club activity allowed in designated area. • Maximum penalty for failure to give information to divers increased from 10 penalty units to 50 penalties. • Maximum penalty for all other offences increased from 10 penalty units to 100 penalty units.
Mon Repos Area	Part 3, Division 8	• Additional object prescribed for the designated area – promotion of turtle education and research. • Application of special management provisions extended from 30 April to 31 May. • Members of the public will not be allowed to enter the designated area between 6pm-6am between 15 October to 31 May unless they are part of a QPWS Ranger guided tour or are authorised to conduct research or monitoring in the designated area (new provision). • Maximum penalty for offences increased from 10 penalty units to 100 penalty units.
Shorebird Roosting and Feeding Areas	Part 3, Division 9	Designated area type and corresponding special management provisions removed and replaced with new management arrangements.
Turtle Monitoring Area	Part 3, Division 10	Designated area type removed.
Turtle Protection Area	Part 3, Division 11	Designated area expanded in size.
Go Slow Area for natural or cultural values	NEW	• New designated area established at Carland Creek. • Intent of the designated area is to help protect the natural integrity and cultural values of the marine park from vessel impacts and to provide opportunities to appreciate, and create awareness and understanding of, the natural and cultural values of the area.

Component of zoning plan	Current zoning plan	Status / change
		• Restrictions to apply on how a vessel is operated in the area – all vessels are to travel off the plane or in displacement mode, speed must be no greater than 6 knots and no motorised water sports are to occur. • Maximum penalty for offences to be 100 penalty units.
No Anchoring Areas	NEW	• Three designated areas established - Platypus Bay, Gatakers Bay and Gables Point. • Intent of the designated area is to protect sensitive habitats and species that are susceptible to damage or degradation from anchoring. • No vessels are to be anchored in the area. • Maximum penalty for offence to be 100 penalty units.
No Motorised Vessel Areas	NEW	• Two designated areas established – Searys Creek and Cooloola Creek. • The intent of the designated area is to protect the cultural values and natural resources of the area. • No vehicles or motorised vessels are to be used in the area. • An exemption to the rules will apply to recognised Traditional Owners for the area. • Maximum penalty for offence to be 100 penalty units.
Platypus Bay Area	NEW	• New designated area established in North-East Platypus Bay. • The intent of the designated area is to help protect the natural integrity and values of relatively undisturbed, remote areas in the marine park and minimise harm or distress to threatened species. • The take-off and landing fixed wing aircraft and helicopters as well as motorised water sports will be prohibited in the area. • Commercial fishers undertaking a lawful commercial fishing activity (i.e. seine netting) will be exempt from the motorised water sports provisions. • Maximum penalty for offences to be 100 penalty units.
Seasonal Shorebird Closure Areas	NEW	• Four designated areas established – Moon Point, Maaroom, Boonooroo and Cooloola. • The intent of the designated area is to protect critical roost sites that are important for shorebirds, particularly migratory shorebirds, from human intrusion during particular periods and to minimise harm or distress caused directly or indirectly to shorebirds by human activities or domestic animals. • Members of the public will not be able to enter the area between 1 September to 31 October and 1 March to 30 April (inclusive) each year • Recognised persons conducting regular systematic bird surveys, authorised research and/or monitoring and authorised pest control activities will be exempt from the access restrictions, with authorisation. • Maximum penalty for offences to be 100 penalty units.

Component of zoning plan	Current zoning plan	Status / change
ADDITIONAL PURPOSES FOR ENTRY OR USE		

Entry or use without permission or notification	Part 4, section 50	• Remove existing clause 50(a)(v) – carry out emergency repairs to a navigational aid.
		• The following are to be added to the list of activities that do not require permission or notification to be undertaken in the marine park:
		  • Works associated with signage for, or about, the *Fisheries Act 1994.*
		  • Geodetic, bathymetric or similar surveys undertaken by the government.
		  • Works associated with navigational aids or their ancillary buildings authorised under state or Commonwealth legislation including the operation of vessels or aircraft associated with the works.

Entry or use without permission after notification	Part 4, section 51	Removal of the following from the list of activities that can be undertaken without permission but after notification:
		  • Works associated with signage for, or about, the *Fisheries Act 1994*.
		  • Geodetic, bathymetric or similar surveys undertaken by the government.
		  • Works associated with navigational aids or their ancillary buildings authorised under state or Commonwealth legislation including the operation of vessels or aircraft associated with the works.
		The following activity is to be added to the list of activities that do not require permission after notification:
		• Management entities undertaking works to maintain existing sandy beach access points, including use of sand from the beach, following damage from a storm event.
		
		The following activity will now require that the chief executive be given two months' notice before the entry and/or use is to start (currently a timeframe is not specified):
		• undertaking maintenance dredging for navigational purposes.

Entry or use for non-conforming use with permission	Section 52	Permission required for non-conforming uses undertaken in MNP zones. No permission required for non-conforming uses undertaken in CP zones.
PROVISIONS ABOUT ACCREDITATION OF TRADITIONAL USE OF MARINE RESOURCES AGREEMENT		
Accreditation of traditional use of marine resources agreement	Part 5, Division 1	No changes to existing zoning plan provisions.
Authorisations under accredited traditional use of marine resources agreements	Part 5, Division 2	No changes to existing zoning plan provisions.

Component of zoning plan	Current zoning plan	Status / change
REQUIREMENTS FOR CONSIDERING APPLICATIONS FOR PARTICULAR PERMISSIONS		
Matters chief executive must consider for all applications for particular permissions	Part 6, section 72	No changes to existing zoning plan provisions.
RESTRICTIONS APPLYING TO ACTIVITIES CARRIED OUT IN MARINE PARK		
Bait netting	Section 74	• Provisions regarding bait netting in CP zones will apply to all CP zones in the marine park including Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet. • Maximum penalty for using non-prescribed equipment for bait netting to be 100 penalty units.
Crabbing	Section 75	No change to zoning plan provisions.
Netting	NEW	A person must not use a commercial net, other than a bait net, within the HP zone of the Cherwell River and the upper reaches of the Burrum River.
Fishing or collecting	Section 76	Remove clauses (3-5) regarding the removal of dories from primary fishing boats in CP, Buffer and MNP zones.
Limited crabbing	Section 77	No change to zoning plan provisions.
Limited impact research (extractive)	Section 78	No change to zoning plan provisions.
Limited research sampling	Section 79	No change to zoning plan provisions.
Limited spearfishing	Section 80	No change to zoning plan provisions.
OTHER NEW ZONING PLAN PROVISIONS		
Disturbing shorebirds	NEW	• Public entities, such as a local government, must consult with the chief executive about any proposal or action that they plan to undertake that may have an impact on shorebirds or their habitats. • Throughout the park a person must not operate an aircraft, remotely piloted aircraft, vessel or vehicle through a group of shorebirds or take an uncontrolled or unrestrained domestic animal into the park or do any other thing that intentionally or recklessly disturbs shorebirds.

Component of zoning plan	Current zoning plan	Status / change
		• Rules are to apply at all times of the year. • Maximum penalty for disturbing shorebirds to be 100 penalty units.
Particular activities prohibited by regulatory notice	NEW	Introduction of a list specifying the activities that can be prohibited by a regulatory notice in or near an artificial reef. Listed activities include: • Scuba diving, snorkelling and free diving • Spearfishing • Recreational and commercial fishing • Charter fishing • Anchoring. • Surface supplied air diving ***artificial reef*** means any structure or material placed on the substrate, or on or under water, to— • create, restore or enhance a habitat for plants or animals; or • attract plants or animals; or • provide a place for diving or fishing activities.
SCHEDULE 1 – NON CONFORMING USES		
Conducting an aquaculture operation in a habitat protection zone or conservation park zone	Activity 1 in current zoning plan	Remove existing non-conforming use and associated conditions for this activity as aquaculture (not involving the addition of feed) can be authorised in accordance with the entry or use provisions for CP, HP and GU zones.
Taking in the coral fishery in the conservation park zone located north of Woody Island	Activity 2 in current zoning plan	• Activity will now be undertaken in a MNP zone rather than CP zone north of Woody Island. • Permission will be required to undertake the non-conforming use. • Retain the existing non-conforming use conditions, with the following modifications: a. the purpose of collecting is to supply the public Reef World Aquarium in Hervey Bay b. collecting to occur in the proposed marine national park zone located north of Woody Island within the current CP zone area within Coral Area 801 defined by the following geographic points: • Northern tip of Woody Island (at or about 25°16.371'S, 152°56.573'E) • 25°16.239'S, 152°56.224'E • 25°16.099'S, 152°56.4'E • 25°16.012'S, 152°55.701'E • 25°15.669'S, 152°56.266'E
Taking in the crab fishery in the conservation park zone located	Activity 3 in current	• Fishing in the commercial crab fishery will continue in the conservation park zone of Baffle Creek, Elliott River, Burrum River system or Great Sandy Strait and Tin Can Inlet as a non-conforming use.

Component of zoning plan	Current zoning plan	Status / change
in Baffle Creek, Elliott River, Burrum River, the Great Sandy Strait and Tin Can Inlet	zoning plan	• Permission will not be required to undertake the non-conforming use. • No change to existing non-conforming use conditions for this activity. • Include the following description of the Great Sandy Strait and Tin Can Inlet CP zone - *The Great Sandy Strait and Tin Can Inlet CP zone occurs south of a line defined by latitude 25^{o} 17.56'S connecting the Urangan Boat Harbour and Woody Island, then south-easterly along the western edge of Woody Island and then a line of longitude 152^{o} 59.58'E that connects Woody Island and K'gari adjacent to Moon Point.*
Taking in the developmental fishery (jellyfish fishery) in the conservation park zone located in the Great Sandy Strait	Activity 4 in current zoning plan	Remove existing non-conforming use and the associated conditions for this activity.
Spoil disposal for beach replenishment purposes in the conservation park zone located in the Great Sandy Strait near the mouth of Snapper Creek	Activity 5 in current zoning plan	Remove existing non-conforming use and the associated conditions for this activity, noting that the proposed nearby strip of HP zone (HPZ23) along the foreshore will allow entities to make applications for spoil disposal for beach replenishment.
Beam trawling in the conservation park zone located in the Mary River and waters from its mouth to 1km seaward of its mouth	Activity 6 in current zoning plan	Remove existing non-conforming use and the associated conditions for this activity.
Taking in the shell grit fishery in the conservation park zone located between Beelbi Creek and Torquay	Activity 7 in current zoning plan	Remove existing non-conforming use and the associated conditions for this activity.
Taking in the aquarium fish fishery in the marine national park zone located east of Little Woody Island	Activity 8 in current zoning plan	• Retain the existing non-conforming use conditions, with a modification requiring fishers to demonstrate a history of collecting in the MNP zone located at Little Woody Island since 31 August 2006 to keep fishing in the area.
Taking in the net (tunnel net – N10) fishery	NEW	• Fishing in the commercial tunnel net fishery will continue in the CP zone of the Great Sandy Strait and Tin Can Inlet as a non-conforming use. • Permission will not be required to undertake the non-conforming use.

Component of zoning plan	Current zoning plan	Status / change
		• Only applies to fishers authorised under the *Fisheries Act 1994* to carry out netting in the N10 (tunnel net) fishery in the Great Sandy region.
Taking in the set pocket net fishery (part of the N1 net fishery)	NEW	• Fishing in the commercial set pocket fishery will continue in the CP zone of the Mary River as a non-conforming use, from a line where longitude 152 51.76E intersects HAT on the northern bank to where longitude 152 52.03E intersects HAT on the southern bank, upstream to the limit of the marine park. • Permission will not be required to undertake the non-conforming use. • Only applies to fishers authorised under the *Fisheries Act 1994* to carry out set pocket netting.
Taking in the yabby fishery	NEW	• Fishing in the commercial yabby fishery will continue as a non-conforming use in the CP zone in Baffle Creek, Elliott River, Burrum River system, Great Sandy Strait and Tin Can Inlet south of a line defined by a line of latitude 25º 17.56'S that connects the Urangan Boat Harbour and Woody Island, then south-easterly along the western edge of Woody Island and then a line of longitude 152º 59.58'E that connects Woody Island and K'gari adjacent to Moon Point. • Permission will not be required to undertake the non-conforming use. • Fishing may be continued only by a person who holds, or is acting under, DAF authority number 1435 or 3464 authorising take in the yabby fishery. *Authority number 3690 to be removed as it is no longer active.*
SCHEDULE 2 – SPECIES RESTRICTED FOR TAKING OR POSSESSING		
No specimens to be taken or possessed	Part 1	Common names inserted for listed species.
Specimens to be taken or possessed subject to restrictions	Part 2	Common names inserted for listed species.
SCHEDULE 3 - DICTIONARY		
Anchoring	NEW	***anchoring*** **i**ncludes equipment consisting of an anchor, anchor chain and attached tackle, whether or not the equipment is attached to a vessel.
Aquaculture operation	Amendment of existing definition	An ***aquaculture operation***- (a) is an operation for propagating, rearing, keeping, growing, or breeding an aquatic plant or animal, including a fish, crustacean, reptile or mollusc, or other marine product (b) includes: i. the collection of wild species and the introduction of animals and animal husbandry; ii. the generation, release or treatment of chemicals, waste or other pollutants;

Component of zoning plan	Current zoning plan	Status / change
		iii. the harvesting or removal, other than by trawling, of an aquaculture product; iv. the construction, operation, maintenance, modification, demolition or removal of any structure associated the operation.
Bait gathering	Amendment of existing definition	***bait gathering*** means taking, in compliance with the *Fisheries Act 1994*, crabs, eugaries, worms or yabbies by hand or by a hand-held implement, other than as part of a harvest fishery.
Developmental fishery program	Amendment of existing definition	***developmental fishery program*** means a program of fishing or collecting, other than a program of collecting coral that— (a) uses equipment or techniques not previously used in a commercial fishery, within the meaning of the *Fisheries (General) Regulation 2019*, in the marine park; or (b) targets, either wholly or in part, a species for which there is no commercial fishery in the marine park.
Hydrofoil	NEW	***hydrofoil*** means a motorised vessel that has plates or fins attached by struts fore and aft for lifting the hull clear of the water as speed is attained.
Media activity	NEW	***media activity*** means the recording of images or sounds, including, for example, by filming, photographing or sound recording.
Motorised vessel	NEW	***motorised vessel*** means a vessel that is being propelled by an engine using an electric, biofuel, petrol or diesel fuel source.
Motorised water sport	NEW	***motorised water sport*** means an activity involving any of the following— (a) driving a motorised vessel other via the most direct reasonable route between departure point and destination location or in a navigation channel, including, for example— (i) in a circular pattern; or (ii) by weaving or diverting the vessel; or (iii) by surfing down, or jumping over or across, any wave, swell or wash, other than for any necessary turn or diversion; (b) towing a person behind a motorised vessel, including, for example, waterskiing or parasailing.
Mooring	NEW	(a) means a thing used, or intended to be used, in an area, for mooring a vessel, consisting of- i. a device attached to, or sitting on, the land in, or underlying, the area; and ii. a system involving cables, chains, ropes or other things attached to the device; and iii. a buoy, or other float on the surface of the water, attached to the system, that marks the location of the device and system; but (b) does not include equipment that is part of a vessel.
Navigate	Amendment	***navigate*** includes moor, or anchor, or secure a vessel to a non-authorised structure in the course of

Component of zoning plan	Current zoning plan	Status / change
	of existing definition	navigation.
Pelagic species	Remove definition	Definition no longer required due to removal of buffer zone as a zone type in the marine park.
Shorebird	Amendment of existing definition	***shorebird*** includes all species within the order Charadriiformes.
Stowed and secured	Amendment of existing definition	***stowed and secured***, for equipment used for fishing and collecting means- (a) The equipment is not deployed and cannot be easily deployed for fishing or collecting activities and includes all rods, lines, hooks, nets, traps and all other fishing equipment. *For example* (i) no fishing equipment can be held by a person; (ii) all fishing equipment should be unbaited and all lures secured back to the rod; (iii) fishing rods should be placed in rod holders or inboard the vessel; (iv) all fishing lines are secured back to the rod or reel; and (v) no fishing equipment should be in the water. (b) if the equipment is trawl fishing apparatus, means— (i) that the nets are out of the water or that the fore ends of the nets are drawn up to the booms; and (ii) that the otter boards are drawn up to the trawl blocks on the booms or are inboard a vessel; and (iii) that the net's lazy lines are through the blocks; and (iv) that the net's cod ends are open.

Appendix 11. Legislative amendments required to support changes to declared Fish Habitat Area boundaries within Great Sandy Marine Park.

Name of declared FHA	Locality	FHA legislative change	Reason
Baffle Creek	Baffle Creek	Statutory plan - Align FHA exclusions at Rosedale aquaculture facility and Boaga with marine park GU zone. Statutory plan - Amend small area at Flat Rock Picnic Area from management A to management B to allow applications for beach nourishment. Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number.	Complementarity with proposed zoning plan change – FHA boundary to align with amended marine park zone boundary.
Burrum	Burrum River	Statutory plan - Amend seaward boundary of Burrum FHA exclusion at Buxton and Walker Point to match marine park coordinates. Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number.	Complementarity with proposed zoning plan change – FHA boundary to align with amended marine park zone boundary.
Burrum	Burrum River	Schedule 3 of the Fisheries (General) Regulation 2019 – List any BNTAC Native Title Determination exclusive use area lots as exclusions, subject to further discussion with BNTAC.	Complementarity with marine park exclusion and recognition of native title rights and interests.
Burrum	Gregory River	Statutory Plan - Amend outer boundary at upstream extent, move 30m downstream. Amend schedule 3 of the Fisheries (General) Regulation 2019 with new Plan revision number.	Complementarity with proposed zoning plan change – FHA boundary to align with amended marine park zone boundary.
Elliott River	Elliott River	Statutory plan - Change Elliott River FHA exclusions at Melcer Road aquaculture facility to match new GU zone in marine park. Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number.	Complementarity with proposed zoning plan change – FHA boundary to align with amended marine park zone boundary.
Elliott River	Elliott River	Statutory plan - Show exclusion for Elliott Heads to Riverview water pipeline (expanded from 15m to 30m either side of the pipeline).	Complementarity with proposed zoning plan change – FHA exclusion to align with new marine park GU zone boundary.

Name of declared FHA	Locality	FHA legislative change	Reason
		Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number.	
Fraser Island	Breaksea Spit	Statutory plan - Amend outer boundary to limit of Queensland Coastal Waters. Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number.	Current boundary as shown on the FHA plan extends beyond Queensland Coastal Waters.
Kauri Creek	Great Sandy Strait	Schedule 3 of the Fisheries (General) Regulation 2019 - List any BNTAC Native Title Determination exclusive use area lots as exclusions, subject to further discussion with BNTAC.	Complementarity with marine park exclusion and recognition of native title rights and interests.
Maaroom	Great Sandy Strait	Schedule 3 of the Fisheries (General) Regulation 2019 - List any BNTAC Native Title Determination exclusive use area lots as exclusions, subject to further discussion with BNTAC.	Complementarity with marine park exclusion and recognition of native title rights and interests.
Susan River	Susan River	Statutory plan - Remove current 'mooring area' and replace with a larger management B area. Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number and to remove the provision that excludes the 'mooring area' shown on the statutory plan from the FHA.	Allow for future vessel buoy moorings, subject to approval, in area with identified demand.
Tin Can Inlet	Searys Creek	Statutory plan - Amend FHA boundary to exclude for future possible upgrade of road (as per marine park boundary). Statutory plan – Exclude power line corridor to allow for possible future upgrade (as per marine park boundary). Amend schedule 3 of the Fisheries (General) Regulation 2019 with new plan revision number.	Complementarity with proposed zoning plan change – FHA boundary to align with amended marine park zone boundary.
Various	Boat Ramps	Schedule 3 of the Fisheries (General) Regulation 2019 - List 30m boat ramp exclusions where they occur in FHAs (Baffle Creek, Beelbi, Burrum, Elliott River, Kauri Creek and Kolan River FHAs).	Complementarity with marine park exclusions.

Appendix 12. Comparison of Queensland environmental offence penalties

Comparison of maximum penalties prescribed for similar offences by other pieces of Queensland environmental legislation to those prescribed in the Marine Parks (Great Sandy) Zoning Plan 2017 (the current zoning plan).

GSMP zoning plan offence	**Current maximum penalty[1]**	**Similar offence in other legislation**	**Maximum penalty applied in other legislation** *(Number of penalty units[2])*
In a go slow area, operate a speedboat in a planing or non-displacement mode. Operate a vessel in a manner which could result in striking a turtle or dugong	10	Nature Conservation (Animals) Regulation 2020 Bring a boat within the stated distance of the marine mammal at the stated speed Bring a boat within the caution zone for a marine mammal (other than special management declaration) Fail to comply with requirements if whale/dugong comes within caution zone (other than special management declaration)	 165 120 120
Bring domestic animal/allow a domestic animal under person/s control to enter/use the Mon Repos area without permission	10	Nature Conservation (Protected Areas Management) Regulation 2017 Uncontrolled dog in protected area	 20
Take dog into a shorebird roosting and feeding area unless dog is controlled or restrained in manner that prevents disturbance to shorebirds	10	Nature Conservation (Protected Areas Management) Regulation 2017 Uncontrolled dog in protected area	 20
Trawl in turtle protection area within prescribed times	100	*Fisheries Act 1994* Trawling in closed area between 1 November – 31 January	 1000*
Enter/use an area in a fish trap area for anchoring without permission Enter/use an area in a fish trap area to excavate, modify or remove material forming/associated with/contained in the area without permission	10 10	*Aboriginal Cultural Heritage Act* Marine Parks (Great Sandy) Zoning Plan 2017 Interfere with the wreck of the ex-HMAS Tobruk without a permission	1000* 100

*penalty prescribed by Act of Parliament

[1] Maximum penalty that can be prescribed in legislation subordinate to the *Marine Park Act 2004* (e.g. zoning plans) is 165 penalty units

[2] As at 1 July 2022 the value of one penalty unit was $143.75