Queensland Parks and Wildlife Service
Department of Environment and Resource Management

Holbourne Island National Park and adjoining State Waters

Management Plan 2011

Tomorrow's Queensland: strong, green, smart, healthy and fair

Toward 2 Tomorrow's Queensland

Queensland Government

Holbourne Island National Park and adjoining State Waters

Central Queensland Coast Bioregion

Prepared by:

Planning Services Unit

Department of Environment and Resource Management

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Front cover photograph: Holbourne Island National Park. Photo: DERM.

Top right photograph: Rocky headlands of Holbourne Island National Park. Photo: DERM.

Centre right photograph: *Guettarda speciosa*. Photo: DERM.

Bottom right photograph: View from Holbourne Island National Park. Photo: DERM.

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Vision statement

As a remote natural continental island setting, Holbourne Island National Park is valued as a seasonal refuge and breeding habitat for vulnerable marine turtle species and significant coastal birds. The sandy beaches, rocky shores and unusual continental island setting of pisonia forest are protected as unmodified habitat. The island's unique granite outcrops are also recognised and protected for the Thursday gastropod *Temporena whartoni*.

The island's rich marine life and fringing reef flats are used by scientists to improve management decisions to protect the Great Barrier Reef.

Visitors to the island enjoy a remote wilderness free of human impacts. No permanent visitor facilities are provided.

Contents

1. Management intent

Holbourne Island National Park has exposed hillsides, granite outcrops, grasslands and foredunes. The Holbourne Island National Park and adjoining State Waters Management Plan incorporates the intertidal area of the Great Barrier Reef Coast Marine Park to the low water mark, which includes the islands rocky outcrops, reefs and beaches. These diverse landscapes will be managed for low-key recreation and nature conservation. The purpose of management for Holbourne Island National Park will be to:

- conserve island landscape and foreshore quality and integrity, having regard for the high nature conservation and cultural heritage values
- conserve and protect rare and threatened species of the park, including the uncommon continental island example of pisonia forest, and adjoining vulnerable and dynamic intertidal foreshores
- ensure that island transport access and visitor activities does not adversely impact on species of conservation significance
- obtain more information on the island's natural and cultural resources
- identify cultural, historical and archaeological sites of significance and address any threat
- promote Traditional Owner's knowledge, where relevant
- offer a low-impact and remote experience, subject to seasonal access restrictions, with no visitor facilities, offering provision for small-scale commercial tourist ventures, where appropriate
- support research and monitoring to improve the understanding of park's natural and cultural values
- continue to build relationships with stakeholders, particularly the Australian Maritime Safety Authority, Indigenous Traditional Owner representatives, Whitsunday regional tourism organisations, Great Barrier Reef Marine Park Authority, relevant research organisations and park users.

2. Basis for management

The Queensland Parks and Wildlife Service (QPWS) is responsible for the on-ground day-to-day management of Holbourne Island and the adjoining State waters. These protected areas are primarily managed in accordance with the *Nature Conservation Act 1992* and associated regulations to protect land, wildlife and cultural values. The emphasis for park area management is to be undertaken consistent with specific management principles for national parks, listed under Section 17 of the *Nature Conservation Act 1992*. QPWS is responsible for management of the protected area, though specific responsibility is also held by the Australian Maritime Safety Authority for the lease area. Holbourne Island National Park and adjoining State waters are part of the Great Barrier Reef World Heritage Area.

The national park extends to mean high water springs and shares a common boundary with State waters protected by the Great Barrier Reef (Coast) Marine Park. This marine park is managed under the authority and provisions of the *Marine Parks Act 2004* and regulations. Inclusion of State waters in this plan will assist QPWS to manage the protected areas and adjoining State waters in a consistent manner (Appendix A, Map 1). The plan will also apply to any islands or areas that are added to Holbourne Island National Park.

The Great Barrier Reef Marine Park Zoning Plan (Commonwealth) and the Great Barrier Reef Coast Marine Park Zoning Plan identify the surrounding intertidal area and waters of Holbourne Island to be Conservation Park (Yellow) Zone (Appendix A, Map 2). This zone allows for increased protection and conservation, while providing opportunities for reasonable use and enjoyment including limited fishing.

Holbourne Island National Park and adjacent State waters support a range of species of conservation significance including migratory species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. These species are further protected by international conventions such as the Bonn Convention, the China–Australia Migratory Bird Agreement, Japan–Australia Migratory Bird Agreement and Republic of Korea–Australia Migratory Bird Agreement (Appendix E).

Vegetation values for the management area are identified according to their equivalent and assigned regional ecosystem descriptions under the Department of Environment and Resource Management (DERM) biodiversity status. Management responsibility for controlling declared pest plants and animals is effected under the *Land Protection (Pest and Stock Route Management) Act 2002.*

Recreation activities in the management area are managed in accordance with the Whitsunday and Mackay Islands Visitor Management Strategy 2007, which provides guidelines on commercial use, access, facilities and activities. Visitor access is to be managed according to the principles of a remote natural zone and natural zone, as described in Appendix A, Map 4 and Appendix B, Table 1.

The Queensland Coastal Plan identifies the management area as a protected area of state significance for its natural resource and scenic coastal landscape values. The Queensland Coastal Plan recognises the statutory planning and development assessment framework of the *Sustainable Planning Act 2009* as the basis for their management.

There is no Native Title claim registered for the management area; however recognition of Aboriginal cultural heritage interests and partnerships with Traditional Owner groups is encouraged. Indigenous places of historic or prehistoric significance are protected under the provisions of the *Cultural Record (Landscapes and Queensland Estate) Act 1987*. Cultural resource management is in accordance with the Burra Charter, Queensland Heritage Strategy 2009 and the Charter for the Protection and Management of Archaeological Heritage, which provide detailed guidelines for the management of cultural heritage places. The *Queensland Heritage Act 1992* and the *Aboriginal Cultural Heritage Act 2003* provide the legislative framework for management of cultural heritage places on the park.

3. Location and regional context

Holbourne Island National Park (33.0 ha) is 37 km north of Bowen and, is the most northern and remote island of the greater Whitsunday region (Appendix A, Map 1). Holbourne Island is directly south-west of an inner shipping route through the Great Barrier Reef Marine Park (Commonwealth), with partly sheltered waters surrounding the island selectively used as an anchorage, usually overnight.

The management area provides a low-key visitor experience in a remote setting without large or regular groups visiting. As an exposed and isolated island, small vessel access is restricted. A small number of tourists visit the management area by commercial tours. The protected inshore waters are used by commercial and recreation fishers for overnight anchoring.

4. Protecting and presenting the park's values

4.1 Landscape

The management area's scenic values are due to its remote location and diverse landscapes. Landscape types range from rocky escarpments, headlands, coral reefs and sandy beaches. There are two prominent granite outcrops separated by low areas that extend to the more sheltered south-west. Two distinct hillsides and rocky areas are located at the eastern and western extremities, separated by a low rocky area and beaches. A high rock (granite) escarpment extends above the northern shore to a height of 111 m and supports an automatic navigation beacon. A flatter phosphatic rock in the island's south-west is a notable feature. These granite outcrops are significant as they support populations of the Thursday gastropod *Temporena whartoni*, a mid-sized snail having a very short mobile range (DERM 2010).

Vegetation includes a diverse array of shrubs, grasslands and foreshore plants, which offer marginal habitat for turtle nesting and directly support coastal bird breeding. The flatter, low-lying area to the south-west and the hind dune area of the north-west beach contain phosphatic rock, which cover about one-sixth of the island. Windswept lantana *Lantana camara* (pest plant species) also forms a sparse to dense cover over the flat and hillside grasslands that extend over the island's centre.

The lower island perimeter contains fringing rocky and coral reef flats and lagoons, extending mainly from the south-west and south-east shores. These are mainly contained in distinct sheltered bays on the western side, and over the island's lower and protected terrain to the south and west. A series of algal terraces, form a coral-algal rim, fringing the seaward extent of coral reef. The largest expanse of reef fans up to 500 m wide and extends approximately 2.5 ha south of the islands vegetated rocky foreshores. Along the south-eastern reef, there is evidence of a causeway to the island shore, formed by historical blasting for barge access.

Rock phosphate mining has modified the landscape on the island's south-west side were extracted during the early 1900s (between 1918 and 1921) by Holbourne Island Phosphate Company Limited. These landscape changes are evident by vegetated borrow pits and parallel spoil mounds. These areas have been recolonised by native and pest plants.

An automated navigation aid is positioned on the island's central peak. A small tower now operated by solar power aids shipping navigation that pass the island's north-eastern side. A white single-railed metal post fence extends up the south-western slope, which is partly visible from the western beach. This fence supports an abandoned gas pipeline; the original supply line for the navigation beacon. A concrete pad at the base of the hillside is the only remains of a gas cylinder house that serviced the original light station.

Servicing of the light station by gas was previously undertaken using a LARC (Lighter Amphibious Resupply Cargo Vessel) for access. Remnants of a single LARC track are evident near the gas cylinder house; however, the track has become obscured by regrowth vegetation along the former track towards the island periphery, between the two island peaks. Track features are not visible from the island's lower elevations and foreshore areas. QPWS intends that future access to the leased facilities does not emphasize track formation and no provisions will be made for transport in the management area.

The parks highest peak features a navigation aid and helipad facility under lease (0.2 ha), managed by the Australian Maritime Safety Authority (Appendix A, Map 1). The lease agreement was granted under Section 35 of the *Nature Conservation Act 1992* and is effective from 1 July 2000 until 30 June 2046. By arrangement of the Commonwealth Government, the lease agreement is part of the Australian Maritime Safety Authority's large network of navigation aids that exist along the inner shipping route of the Great Barrier Reef.

Desired outcomes 2021	Actions and guidelines
The island's diverse landscapes and high scenic values are enhanced. Essential navigation aid infrastructure requirements and visitor use is sensitive to the island's existing visual integrity.	A1. Aircraft landings for infrastructure maintenance permitted only via helicopter at the designated helicopter landing pad. A2. Infrastructure likely to compromise visual and ecological integrity will not be supported. A3. No visitor facilities are to be constructed.

4.2 Native plants and animals

4.2.1 Native plants

The management area's broad vegetation types range from undulating grassland, such as blady grass *Imperata cylindrica*, stunted shrubs, low trees, thickets of stunted rock fig *Ficus platypoda* and a scattering of woody weeds on hillsides and lowlands. Due to its isolation, limited interference and extreme conditions, such as lack of fresh water and variations in soils and exposure, the management area provides an example of vegetation diversity, with over 90 species of plants (Walker 1987).

Holbourne Island is mapped by the Queensland Herbarium on the slopes and headlands as containing four regional ecosystems, including the endangered *Pisonia grandis* forest (3.2.29), and of concern vegetation (8.12.13a), comprising grassland, or *Xanthorrhoea latifolia* subsp. *latifolia* shrubland, including areas recently colonised by *Timonius timon* shrubland.

Vegetation at the top of the management area's beaches are highly adapted to wind, salt spray and shifting sands, and are important in stabilising the foreshores. The foreshore plant communities are fragile and are essential that these remain a stable landscape element to maintain continuity in coastal bird and turtle breeding. Behind the foredunes, stabilising creepers, grasses, salt-tolerant shrubs and trees are prevalent. The most significant vegetation is the small band of open pisonia forest (approximately 2–5.5 m high) that extends as a 0.5 ha narrow strand of open forest behind the western beach and also scattered elsewhere on calcareous lowlands. The occurrence of this vegetation community is unusual on a continental island. It is most commonly featured as part of coral cays. Significant stands of pisonia have been cleared for phosphate rock mining in the 1920s, with relatively little recovery (National Museum of Natural History Smithsonian Institution 1991).

Along the south-western flat, a central grove of mixed trees to 9 m high exists on the edge of a mine gully. Pandanus and coastal she-oaks are present as a small aggregate on a fore dune located beyond the rocky shores of the most southern headland. Nested rocks in the south-east are partly vegetated with coastal jack bean *Canavalia rosea,* bulls head vine *Tribulus cistoides*, sea purslane *Sesuvium portulacastrum*, goats foot *Ipomoea pes-caprae*, and green amaranth *Amaranthus viridis*. Vegetation in the management area also includes grasses, such as scrub pigeon grass *Setaria australiensis*, stalky grass *Lepturus repens*, and stunted rock fig *Ficus platypoda* trees.

Desired outcomes 2021	Actions and guidelines
Subject to natural variation, the sensitive plant species and communities along and behind the beach foredunes are protected and enhanced, where possible. Information on the conservation status and condition of vegetation communities is systematically recorded and continuously informs park management decisions.	A4. Pisonia forest and significant foredune vegetation are protected from wildfires, pests and visitor use. A5. Information from vegetation monitoring, survey and onsite research are recorded on DERM's information systems and used to address information gaps and refine management practices. A6. Identify, document and communicate the conservation significance of pisonia forest and foredune vegetation through visitor guides and other off-park information.

4.2.2 Native animals

The management area is recognised for its coastal dependent fauna (Appendix E, Tables 1 and 2). The management area is a nesting area for the green turtle *Chelonia mydas* and flatback turtle *Natator depressus*, both listed as vulnerable under the Nature Conservation (Wildlife) Regulation 2006. Despite a field survey and reports as far back as 1974 noting turtle tracks on the beaches, the density of nesting female turtles has never been fully quantified. Current information suggests that approximately 10 female flatback turtles nest on the management area each year (Limpus, pers.comm. 2010). The management area is part of the State-wide turtle management and monitoring program which is co-ordinated by Great Barrier Reef Marine Park Authority and QPWS. Bird life is seasonally abundant in the management area with coastal and migratory birds visiting the reef flats and beaches as stopover points to feed, roost and breed as part of their annual migration patterns, particularly between 1 October and 31 March. Smaller bird populations are based on the island.

Historically, bird colonies have declined as a result of the earlier phosphate mining on the island between 1918 and 1923. It is not known what species contributed to the island's significant guano deposits, although a brown boobie *Sula leucogaster* rookery was reported around the time the island was mined for the phosphate derivative (Walker 1987). More recent field surveys have noted the presence of a brown booby rookery at the island's sheltered eastern cliff face as well as nesting pied imperial-pigeons, the near threatened sooty oystercatcher *Haematopus fuliginosus*, nesting sea eagles *Haliaeetus leucocephalus*, and dove *Zenaida* sp, kestrel *Falco sparverius* and quail *Coturnix* sp. Great Barrier Reef Marine Park Authority, QPWS and other relevant organisations monitor coastal birds throughout the Great Barrier Reef and update the Coastal Bird Atlas and WildNet databases. As an essential measure for restorative management, a seasonal closure is to apply to all visitors and commercial operators to the intertidal and terrestrial areas between 1 October and 31 March each year. This closure aims to increase the success of nesting and recruitment of turtles and coastal birds.

Terrestrial species are few and less diverse due to isolation, though one endemic snail species, Thursday gastropod *Temporena whartoni*, is known only from Holbourne Island and is of importance. In the absence of detailed animal surveys, baseline biodiversity values and areas of dependent habitat are not completely understood.

The only known population of the Thursday gastropod is recognised as being located on Holbourne Island. This species is one of the shortest of short-range endemic snail that inhabits the island's granite outcrops. As a mid-sized snail, it has a rounded shell averaging 36 mm wide and 25 mm high. It shares some conchological and anatomical characteristics with three other species on the adjacent mainland, including the smaller *Varohadra macneilli* (Iredale 1937), which also occurs on granite islands (Scott 2010).

The management areas fringing reef flats and lagoons are extensive, dominated by stag and plate corals amongst less prominent forms of hard and soft corals. A diverse range of epibenthic fishes and pelagic species complement the rocky and coral substrate of the inshore and outer shelf reefs. The condition and abundance of species have been recorded by the Australian Institute of Marine Science, Great Barrier Reef Marine Park Authority and QPWS as part of a long-term monitoring program of the Great Barrier Reef and Reef Health and Impact Survey (RHIS) and the Island Condition and Trend project. The management area's reefs have been subject to extensive damage from the crown of thorns starfish *Acanthaster planci* with a severe event in 1987. This resulted in approximately three-quarters of live coral being decimated. Steady improvements in condition have since been observed and the last survey in 2003 indicated coral abundance and diversity comparable to pre-1987. The rate of recovery in more recent times is said to have accelerated (Sweatman, pers. comm. 2010).

Desired outcomes 2021	Actions and guidelines
The turtle and coastal bird populations are well protected and considered as indicator species for major threats and management issues. QPWS are informed on the population status of priority marine and intertidal biota, as the basis for their future protection and management. Holbourne Island and its critical foreshore habitat remains well protected as a remote natural setting through seasonal entry restrictions.	A7. Continue to support, contribute and implement the state-wide Reef Health and Impact Survey (RHIS), Island Condition and Trend, turtle and coastal seabird monitoring projects, as required. A8. Support research on the isolated gene pools of terrestrial invertebrates. A9. Maintain the seasonal closure to all visitors of the intertidal and terrestrial areas of Holbourne Island between 1 October and 31 March, to protect turtle and coastal bird nesting, migration and essential habitat.

4.3 Indigenous culture

The Juru and Ngaro Aboriginal groups affiliate with the Whitsunday area as their homeland, including Holbourne Island. As maritime hunters and gatherers, their main resources were drawn by harvests of the sea, with a self-sufficient lifestyle that may possibly have been aided by trade links between the coast and hinterland (Gaston, pers. comm. 2010, DERM 2010).

The Juru and Ngaro interests are represented by the Gudjuda Reference Group Aboriginal Corporation.

Specific cultural issues identified by the Gudjuda Reference Group Aboriginal Corporation include the protection of intellectual and cultural property on the management area, including Dreamtime stories, songs and sites, and Traditional Owner involvement in environmental and operational management of the area. There is limited knowledge of the management area's Indigenous history and affiliations (Gaston, pers. comm., 2010). These issues need to be addressed as an important aspect of managing the area's cultural landscape, in consultation with the Gudjuda Reference Group Aboriginal Corporation.

Desired outcomes 2021	Actions and guidelines
Indigenous cultural heritage values are protected from visitor impacts and Traditional Owner links to the management area are maintained as a basic element of park management.	A10. Respond to any new information or identification of Indigenous cultural sites on the park for management purposes, in consultation with Traditional Owners, and encourage research of cultural heritage values. A11. Continue to build complementary working relationships with Traditional Owners having a link to the management area.

4.4 Shared-history culture

Holbourne Island National Park was declared in 1982 and was named after Admiral Francis Holbourne, who commanded the fleet in North America in which Captain Cook served in 1757 (Duyfken 1606 Replica Foundation & Consultas Pty Ltd 2001). There is a small amount of shared-history culture associated with the management area, signified by the following events:

- the island was settled and mined for phosphate between 1918 and 1921 by the Holbourne Island Phosphate Company Limited, though closure resulted from difficulty in finding a suitable market
- a steel passenger and freight steamer *SS Yongala* sank in a cyclone near the island in 1911
- the island harboured 18 shipwreck survivors of the steamship *SS Gothenburg*, which sank during a cyclone strength storm in 1875
- the island has accommodated a navigational light station for many years, originally run on gas (Australian Maritime Safety Authority 2010, Daley 2005).

The most noted transformation has occurred from removal of rock phosphate by the Holbourne Island Phosphate Company Limited, which commenced in 1918. An associated settlement included a small hut and a tramline was built to mine the south-western phosphate deposit. The original deposit occupied approximately one-sixth of Holbourne Island. Quarried material was carried to the beach via a horse-drawn tramline before being transported to barges using punts. Phosphate was transported from the island, via Bowen, to Brisbane and Townsville for processing to produce superphosphate as agricultural fertiliser.

The grade of material was found to be too low to supply interstate and international markets profitably, but the material was suitable for local markets. In total, 450 tonnes of material was removed from the island in 1918, 850 tonnes in 1919, 450 tonnes in 1920 and 369 tonnes in 1921. The company ceased operations in 1921 as the operation was not profitable. After 1921, no further working of phosphate took place on Holbourne Island and in the 1970s Holbourne Island deposits were declared not commercially viable (Daley 2005).

Mining activity, minor settlement and the old LARC track has resulted in landscape disturbance and significant spread of pest plants, namely lantana *Lantana camara*, over these and other parts of the island.

Following a series of maritime accidents, a navigation beacon was established at the top of the island's south peak to aid safe maritime navigation of surrounding waters, particularly for the nearby shipping channel located west and north of the island. Originally gas powered, the beacon was remotely connected to gas cylinders via a gas line hung from a metal post and rail fence. These are now obsolete structures, as the navigation aid has recently been fitted with a new solar operating system near the beacon's platform. As part of the island's modern history, it will be maintained as the only established facility to continue operating on the island.

Desired outcomes 2021	Actions and guidelines
Shared-history and cultural values are captured as a historical record for optional communication to future visitors of the island.	A12. Continue to document places of historic significance in the park. A13. Visitor information and interpretative material made available off-site to provide an account of the island's historic maritime and cultural connections.

4.5 Tourism and visitor opportunities

In 2010 the management area was surveyed as part of the Great Barrier Reef long-term monitoring program, Reef Health and Impact Survey (RHIS). This program monitors the impact of human activities on marine environments and indicated that the management area has low visitor numbers. Monitoring supports the management of the island as a remote natural zone as described in the Whitsunday and Mackay Islands Visitor Management Strategy 2007. There are traces of human impacts on the island for example debris washed up on beaches, remnants of campfires and minor tracks. No visitor facilities are provided and the park identification sign on the south-western foredune is the only reference for visitor orientation.

The two beaches and relatively sheltered reef anchorage off the south-west shore are a drawcard to visitors wanting to break a sea journey and to take a walk to fish and bird watch. The management area is currently used by recreation and commercial fishers, holiday sailing adventurers, birdwatchers, roving tour operators and one tourist operator. Permitted tourist use includes water based activities for up to 24 passengers using a vessel (up to 35 metres) and one ancillary vessel. Two visits have been made to the inshore waters of the management area over the last 12 months.

Increased pressure for commercial and recreational boat use is likely if the expansion of Bowen Harbour and Abbot Point Port eventuates. Future visitor use will need to be monitored to ensure that the management area continues to provide a remote wilderness experience. While not currently evident from modern use of the area, additional recreational pressures are likely to compromise the natural and cultural values and result in vulnerable species disturbance, erosion, further pest spread, wildfire and litter. The management area will be managed for day-use only, with no facilities and no camping permitted. There is also no existing or future provision for vessel moorings at the nearby shores. The seasonal closure of the management area and adjacent beaches during the turtle breeding season, between 1 October and 31 March, will continue to manage impacts on turtle and coastal bird nesting patterns.

Commercial use will be limited to three commercial operators for vessel based use only, based on demonstrated eco-management credentials, minimal impact and management benefits. All marine commercial tourism will be restricted to vessel-based activities during the seasonal closure period. Land-based activities may be considered outside the seasonal closure period.

The management area is covered by a remote natural zone (Zone 1) to achieve long-term protection of the island's high natural and cultural heritage values and a remote visitor experience (Appendix B). Being the majority of the management area, a landscape classification setting of 1 to 2 applies to this remote natural zone. This setting provides for a predominantly natural landscape with minor evidence of historical impacts or uses.

Visitors have an opportunity to appreciate a remote natural experience in a challenging environment along indistinct tracks. The management area will be managed to offer limited to no evidence of visitor use, a high sense of isolation and cater for experienced travellers with outdoor skills. Visitors are expected to be self-sufficient. There will be no visitor facilities or structures, though limited signage may be present to enforce seasonal closures. In support of navigation safety, special exemption to seasonal restrictions maybe granted to the leaseholder and maintenance subcontractors for emergency repairs.

A natural zone (Zone 2) applies to the leasehold area. Management recognises the lease area's purpose to ensure navigation safety (Appendix B).

The Whitsunday and Mackay Islands Visitor Management Strategy may be referred to for further guidance on regulating visitor use and access.

Desired outcomes 2021	Actions and guidelines
Visitor use is low-key, nature-based and self-reliant, in the absence of permanent facilities. Commercial tourism will not impact on the setting and remote natural experience. Park visitors are provided with appropriate information off-site to help them understand their obligations and enjoy their visit, as needed.	A14. Visitor access and activities are environmentally and culturally appropriate to protect the management area's values and ensure visitor safety in accordance with Appendix A, Map 4 and Appendix B, Table 1. A15. Holbourne Island management area is to be excluded from the standard roving tourist operators Marine Park permits. Three commercial activity permits and marine park tourism permits will be considered for vessel-based day tourism. A16. No permanent visitor facilities or infrastructure will be provided. A17. Continue to implement the Reef Health and Impact Survey (RHIS) strategy, as required. Reef protection markers may be considered should monitoring identify the impacts from boating activities on the reef to be unacceptable. A18. No aircraft will be permitted to land or take off in the management area except for emergencies or specific management purposes. A19. Prohibit camping, campfires and the use of generators or compressors in the management area. A20. Off-site interpretative material will be prepared to: • prevent damage of foreshore vegetation and reef flats • facilitate visitor enjoyment and appreciation of the islands natural and cultural values • undertake necessary preparations for a self-sufficient experience.

4.6 Education and science

4.6.1 Education

The management area is currently not visited by school or research institutions for formal (i.e. primary, secondary or tertiary) education purposes. There are no practical circumstances for using the island as a place for formal education and learning, given the island's remote setting and absence of facilities. Passive reef-based appreciation and observation by adventure and environmental groups seeking a remote experience may be considered by day.

Desired outcomes 2021	Actions and guidelines
Coral reefs in the management area provide learning opportunities for, and are enjoyed by, education and nature-based interest groups.	A21. Vessel-based day-use opportunities may be considered for special groups and activities over the reef and waters in the management area, which do not require access to critical intertidal habitats for coastal birds and turtles.

4.6.2 Science

Preliminary surveys indicate that the vegetation and surrounding reef are of scientific interest. The Australian Institute of Marine Science monitors a reef near the management area as a reference site for their long-term monitoring program. The monitoring data provides a time series trend of key marine species populations, including crown-of-thorns starfish, corals and reef fish, as a basis for their strategic management.

The management area's natural and cultural heritage values, largely unaffected by human disturbance, provides further scope for considering research opportunities. Any research in the management area requires a permit under the Nature Conservation Act and/or the Marine Parks Act.

Desired outcomes 2021	Actions and guidelines
Accurate information of the management area's values is obtained through research and monitoring, and informs future directions for resource management. Cooperative partnerships and networks are considered for establishing meaningful research and monitoring effort.	A22. Support research of minimal impact that increases knowledge of the management area's values for conservation purposes. A23. Record, store and undertake periodic review of DERM's information systems, including permit monitoring information, to improve the understanding of park's values and evaluate the effectiveness of management activities. Collate and communicate scientific research and monitoring information to guide park management decisions and future on-park research. A24. Build networks and actively encourage researchers and park rangers to engage in research and monitoring of park values and activities of critical management interest.

4.7 Partnerships

QPWS is directly responsible for planning, managing and regulating activities in the management area. Working with Traditional Owners, groups, agencies, organisations and individuals with similar interests in managing the area is highly desirable to achieve the vision. Efficiencies in resource sharing, improved communications, decision making and enhanced on-ground outcomes is to be facilitated, where possible, through working partnerships.

A working partnership with the Great Barrier Reef Marine Park Authority presently assists with unifying operational management of the adjoining Great Barrier Reef (Coast) Marine Park, Great Barrier Reef Marine Park (Commonwealth) and Great Barrier Reef World Heritage Area. It is important that QPWS maintains communications with other government agencies and research organisations.

Desired outcomes 2021	Actions and guidelines
The effectiveness of future management is strengthened through cooperative partnerships having strong communication links with a clear purpose.	A25. Continue to liaise, negotiate and initiate reciprocal cooperative arrangements with Great Barrier Reef Marine Park Authority. A26. Continue to build relationships with the local community, organisations, visitors and interest groups to improve knowledge of the management area, and to highlight its significance to the region and broader Great Barrier Reef World Heritage Area.

5. Other key issues and responses

5.1 Climate change

Climate change impacts for the region and Great Barrier Reef are recognised as the single greatest long-term threat with far-reaching implications, which are only just beginning to be understood (Johnson et al. 2007).

Any rise in sea level may further accentuate Holbourne Island's restricted size and isolation, with beach and foredune areas to be most directly affected. The coral reefs and shoreline will become more dynamic, and may provide new conditions and sites for turtle, coastal and migratory bird nesting. Should a loss of beach occur in the long-term, nesting options will generally be reduced. Altered habitat factors, such as reduced area, shading and available feeding, foraging and movement ranges, may force these species to higher ground. Coastal birds and migratory birds may either seek higher ground or move to nearby islands. Turtle populations may experience greater exposure to predators, destruction of nests and eggs, loss of critical nesting beaches, gender balance changes (given their temperature-dependent sex determination), and also be subject to loss of important foraging grounds through possible coral bleaching and seagrass burning (Johnson et al. 2007; Matson 2009).

The management area's isolation may also present a significant risk to the biodiversity of terrestrial fauna species. Their restricted habitat range, particularly for the Thursday gastropod, will require this species to become adaptive to their habitat as the only option to any threats on their abundance. Habitat factors, such as food and water availability, vegetation patterns and disease are critical factors to adaptation and survival of terrestrial species, given Holbourne Island's exposure and isolation.

While foreshore vegetation is adaptive to dynamic conditions, any rise in sea level will displace and relocate Holbourne Island's beaches and foredunes further inland. The stand of pisonia forest and lower grassland is most likely to be affected by saline intrusion, competition with woody weeds, drier conditions and consequential increased risk of fire.

As an adaptive response, Holbourne Island and other similar islands in the Great Barrier Reef may become more important as potential refuges (island arks) for select species, particularly for those representative species on the mainland that are also subject to pressures of direct human interference as a compounding threat to their survival. With its isolation, Holbourne Island may become an increasingly important reserve for management purposes.

Desired outcomes 2021	Actions and guidelines
Threatening processes exacerbated by climate change are minimised through appropriate pro-active management practices.	A27. Incorporate measures of climate change risk and species vulnerability into threatened species registers and provide adaptive management strategies for these species. A28. Support the establishment or continuation of programs designed to monitor the impacts of climate change.

5.2 Pest management

Level one and two pest management strategies have been developed to prioritise regional pest plant and animal controls, guide operational work plans and evaluate program effectiveness on managed estates. QPWS Level One Pest Management Strategy for the Central Queensland Region (Marine Parks) guides pest management programs across the region. QPWS Level Two Pest Management Strategy provides more detailed direction for scheduling pest management activities across the Whitsunday management unit, including Holbourne Island and adjoining State waters. The Whitsunday Regional Council Pest Management Plan will also assist in prioritising pest plant and animal control actions.

Lantana *Lantana camara* is a dominant pest plant species in the management area, covering approximately half of the island. Lantana is present on the middle slopes and coastal flats, particularly in the more sheltered western, central and south-western parts of the island. Density and height of lantana cover over the infestation area ranges from scattered individuals to two-metre high impenetrable thickets.

Other pest plant species include balloon vine *Asclepias physocarpa*, Jamaica or blue snakeweed *Stachytarpheta jamaicensis*, red natal grass *Melinis repens*, prickly pear *Opuntia stricta*, pigweed *Portulaca oleracea*, caltrop *Tribulus* spp., crowsfoot grass *Eleusine indica*, passion flower *Passiflora foetida*, tridax daisy *Tridax procumbens* and Mossman River grass *Cenchrus echinatus*. Whilst containment of lantana is the highest priority for pest management, management of other less abundant pest plants may be a secondary consideration.

There is no evidence of habitation or disturbance by pest animals; however, no formal surveys or records validate this. The presumed absence of pest animals is likely due to the isolation and infrequent visits to the island. To eliminate the potential risk of pest animal introductions or outbreaks, conditional restrictions will be placed on island visitors to reduce the chance of accidental introduction of pest plants or animals.

Desired outcomes 2021	Actions and guidelines
Pest plants are contained and, where possible, minimised. Pest animals are not evident on the management area.	A29. Manage pest plants and animals in accordance with the Management of Pests on QPWS-managed Areas – Operational Policy, including: • use the QPWS Pest Management System and ParkInfo to plan, manage, record and monitor the spread, impacts and management of pest plants and animals • set conditions on tourism and visitor activities where entry and access is regulated by permit • Implement the Level One Pest Management Strategy and Level Two Pest Management Strategy and measure the effectiveness of implementing on-park controls, namely: • halt the spread of lantana and other invasive pest plants • ensure that pest plants do not compete with sensitive foredune and pisonia vegetation. A30. Inform visitors of the impacts and preventative measures for controlling pest plants and animals and, where possible, encourage voluntary participation in weed control programs.

Desired outcomes 2021	Actions and guidelines
	A31. Visitors, including vessels and aircraft operators, must ensure they do not carry pest species to or from the island. A32. Australian Maritime Safety Authority is to practice their co-operative responsibility to plan and implement pest control measures within the lease area, ensuring landscape-level pest management is consistent with QPWS pest management strategies.

5.3 Fire management

There has been no known incidence of fire in the management area, though planned burns may be considered to manage conservation values, maintain suitable habitats and control pest plant spread, particularly the invasive lantana. Any planned burns will be guided by the QPWS Whitsunday Islands Aggregation Level One Fire Strategy to ensure that the existing natural values are not compromised such as the fragile foreshore plant communities, comprising mixed spinifex grassland, herbland and shrubland on the coastal flats, the pisonia open forest behind the foredune of the island's south-eastern beach, and isolated stands of acacia and casuarina near the foredunes.

Native tussock grassland communities surround the exposed headlands, including the navigation beacon located along the mid-eastern coast, and the Moreton Bay ash community, covering the most north-western island peak, are fire tolerant. They require fire to remain healthy and as such should be burnt. For management purposes, sensitive communities on Holbourne Island are to be identified as exclusion zones and fire tolerant communities may be identified as conservation zones.

Desired outcomes 2021	Actions and guidelines
Fire management facilitates pest plant control and vegetation biodiversity, whilst protecting of concern and endangered regional ecosystems, cultural values and property.	A33. Implement and review the QPWS Level One Fire Strategy to protect and enhance the native flora and protect sensitive (foredune and pisonia vegetation) species and communities, with no net loss of these communities. A34. Undertake monitoring to evaluate management actions, including impact of fire on plant and animal populations and diversity, and the appropriateness of regimes recommended in the fire strategy.

5.4 Lease arrangement

The Australian Maritime Safety Authority has direct interest in operating the island's marine aid for navigation, helipad and affiliated infrastructure. Marine navigation interests have been formalised by a special lease agreement with DERM (comprising 203 m^2 on Lot 115 CP882203) under the *Land Title Act 1994* and is valid until 30 June 2049. The lease area will be maintained according to the profile characteristics of a natural zone (Appendix B, Table 1).

The lease agreement provides Australian Maritime Safety Authority and its contractor's access for establishing, operating and maintaining a marine aid to navigation. Access for these operations is only undertaken by helicopter using the designated helipad in the lease area.

Routine communications and minor beacon servicing are undertaken in the cooler months by boat, and the island is traversed by foot (Torlach, pers. comm. 2010). Access to the navigation beacon is via the southern foreshore and along the metal post and rail fence, which has resulted in a lightly formed track. Visits may occasionally be undertaken by helicopter, which coincides with use of heavy equipment. Use of motorised land-based vehicles for island access and transit is no longer permitted.

Desired outcomes 2021	Actions and guidelines
The navigation aid is not damaged by management actions. Management activities and responsibilities of the Australian Maritime Safety Authority do not threaten the natural or cultural values of the management area.	A35. QPWS are to give prior notification to the Australian Maritime Safety Authority, where necessary, of park maintenance operations that may potentially impact on the integrity of the navigation beacon or lease area. A36. The Australian Maritime Safety Authority is to maintain relevant contact details with QPWS and ensure their operations do not interfere with the area's integrity and conservation values. A37. Ensure that the leaseholder and sub contractor permit condition reflects minimal disturbance access. Emergent works are to be scheduled outside the seasonal closure period. All access to the navigation aid is to be by helicopter or on foot.

Desired outcomes 2021	Actions and guidelines
	A38. Any applications to replace or establish new infrastructure should not detract from the natural or cultural values, such as the seascape or landscape. Permits for the provision of future infrastructure requirements will be considered on application to the department and will be subject to the provisions of the *Nature Conservation Act 1992*.

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7. Hyperlinks

Bonn Convention <www.cms.int>

Burra Charter <www.nsw.nationaltrust.org.au/burracharter.html>

Charter for the Protection and Management of Archaeological Heritage <www.international.icomos.org>

China–Australia Migratory Bird Agreement <www.austlii.edu.au>

Conservation Park (Yellow) Zone www.gbrmpa.gov.au

DERM website <www.derm.qld.gov.au>

Environment Protection and Biodiversity Conservation Act 1999 and Regulations 2000 <www.environment.gov.au>

Japan–Australia Migratory Bird Agreement <www.austlii.edu.au>

Key threatening process <www.environment.gov.au>

Land Protection (Pest and Stock Route Management Act 2002 <www.legislation.qld.gov.au>

Nature Conservation Act 1992 <www.legislation.qld.gov.au>

Queensland Heritage Act 1992 <www.legislation.qld.gov.au>

Republic of Korea–Australia Migratory Bird Agreement <www.austlii.edu.au>

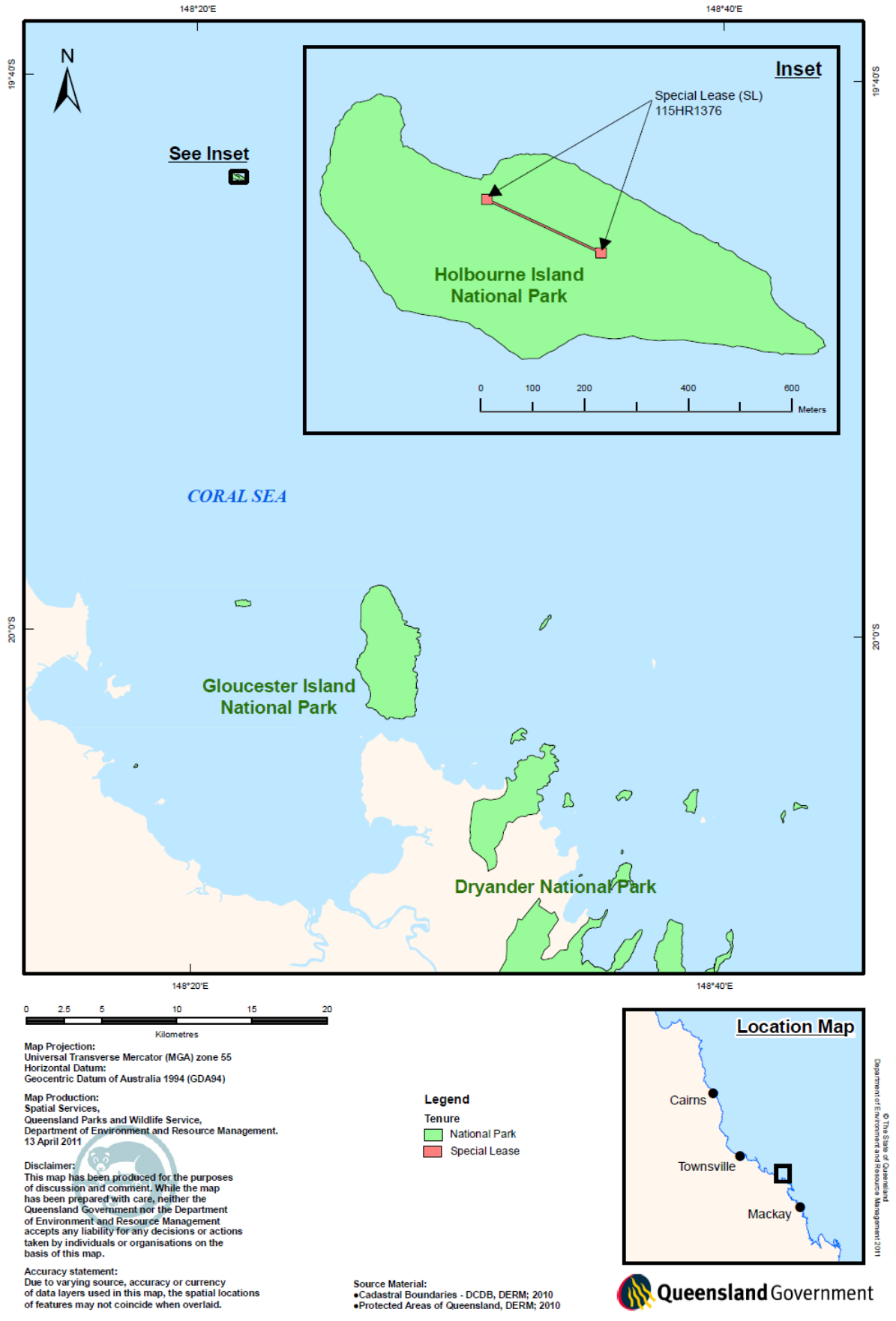
Whitsunday Plan of Management <www.gbrmpa.gov.au>

Whitsunday and Mackay Islands Visitor Management Strategy <www.derm.qld.gov.au>

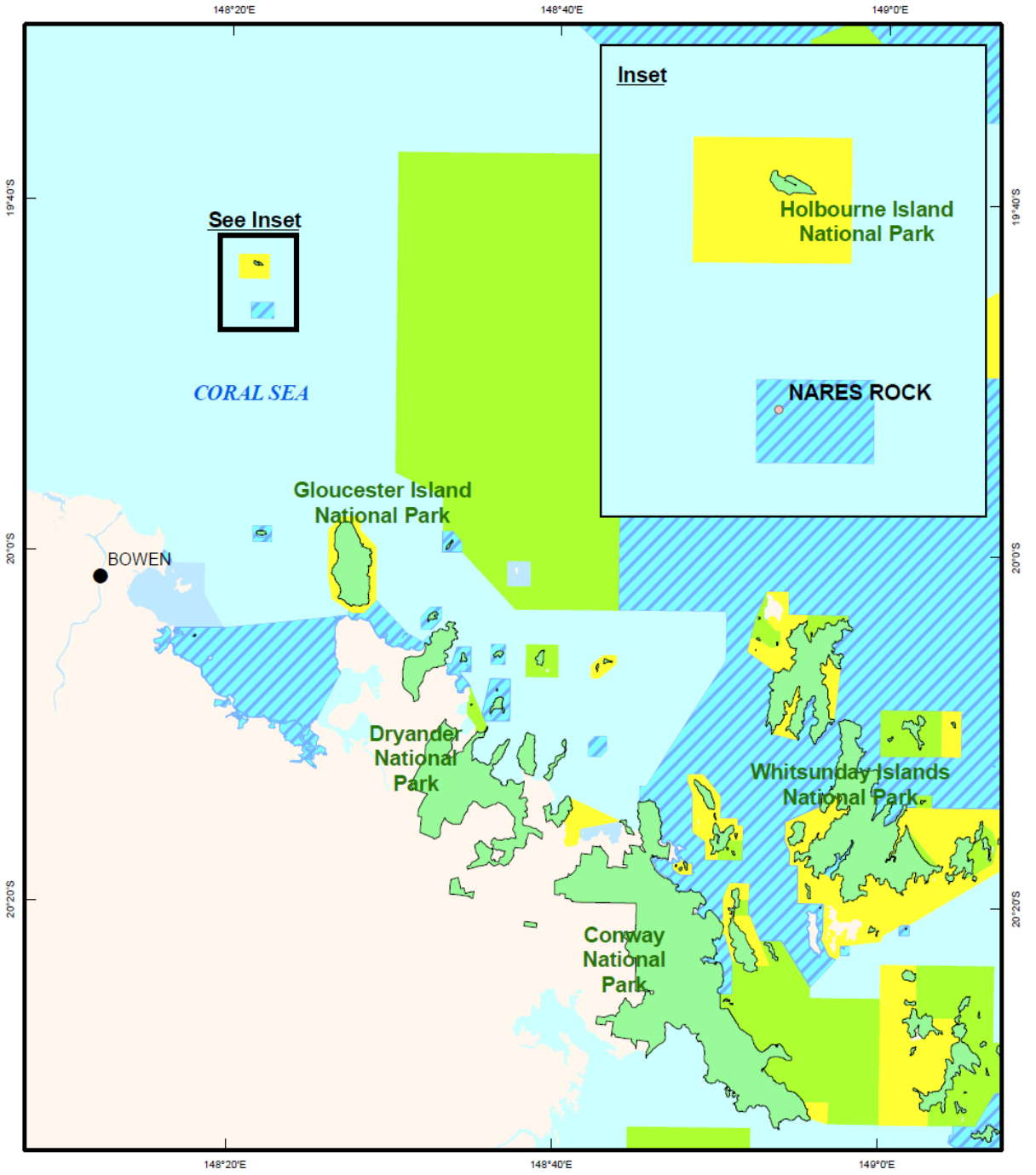
8. Appendixes

Appendix A – Maps

Map 1 Planning area and tenure



Map 2 Marine zones and settings



Map Projection:
Universal Transverse Mercator (MGA) zone 55
Horizontal Datum:
Geocentric Datum of Australia 1994 (GDA94)

Map Production:
Spatial Services,
Queensland Parks and Wildlife Service,
Department of Environment and Resource Management.
15 April 2011

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Accuracy statement:
Due to varying source, accuracy or currency of data layers used in this map, the spatial locations of features may not coincide when overlaid.

N

Scale
0 5 10 20 30 40
Kilometres

Queensland Government

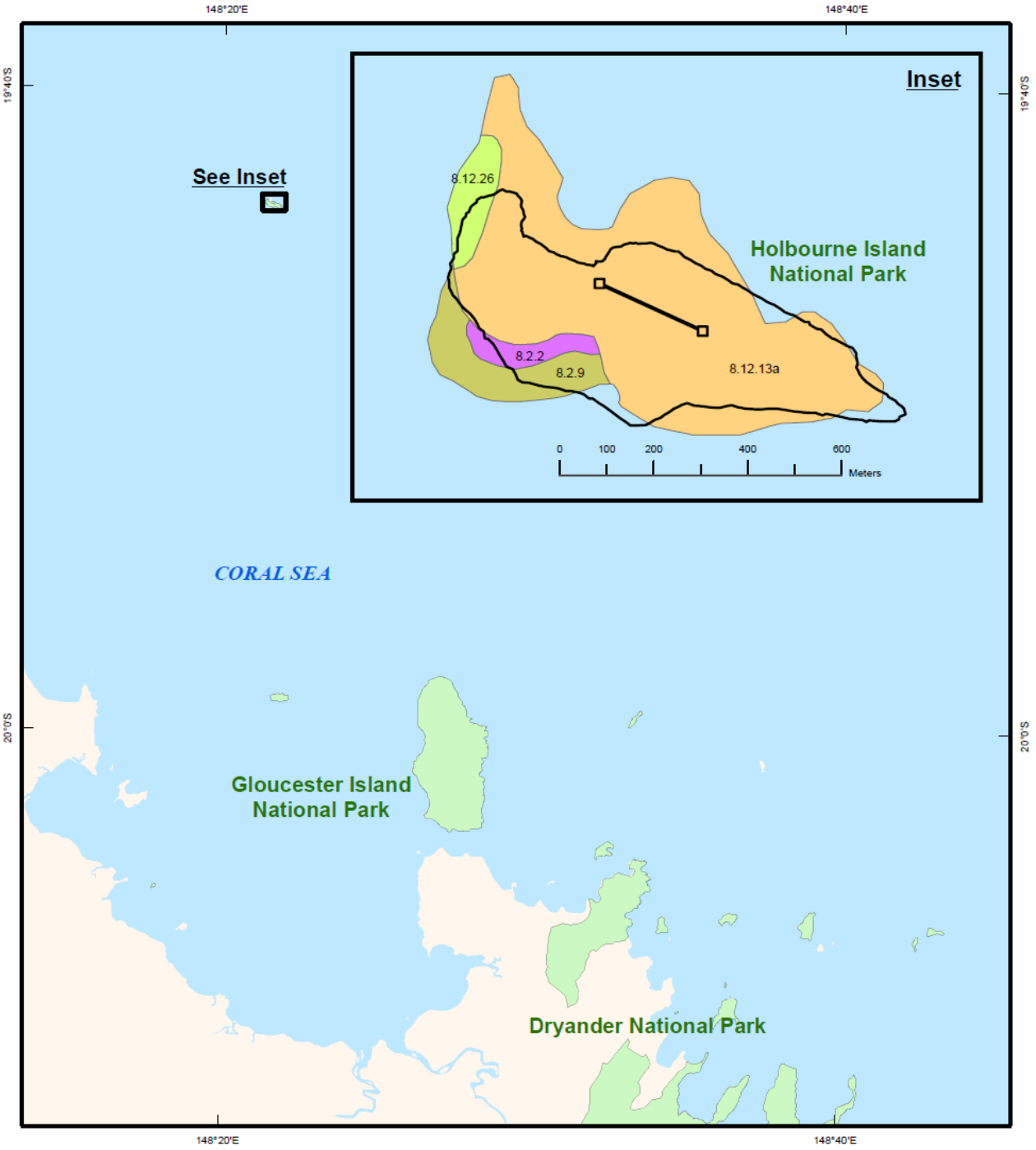
Source Material:
- Marine Parks, Great Barrier Reef Marine Park Authority (GBRMPA); September 2008
- Protected Areas of Queensland, DERM; 2010

Legend

DERM Tenure
- National Park

Marine Park Zones
- General Use
- Habitat Protection
- Conservation Park
- Marine National Park

Map 3 Regional ecosystems



Map Projection:
Universal Transverse Mercator (MGA) zone 55
Horizontal Datum:
Geocentric Datum of Australia 1994 (GDA94)

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N

Scale
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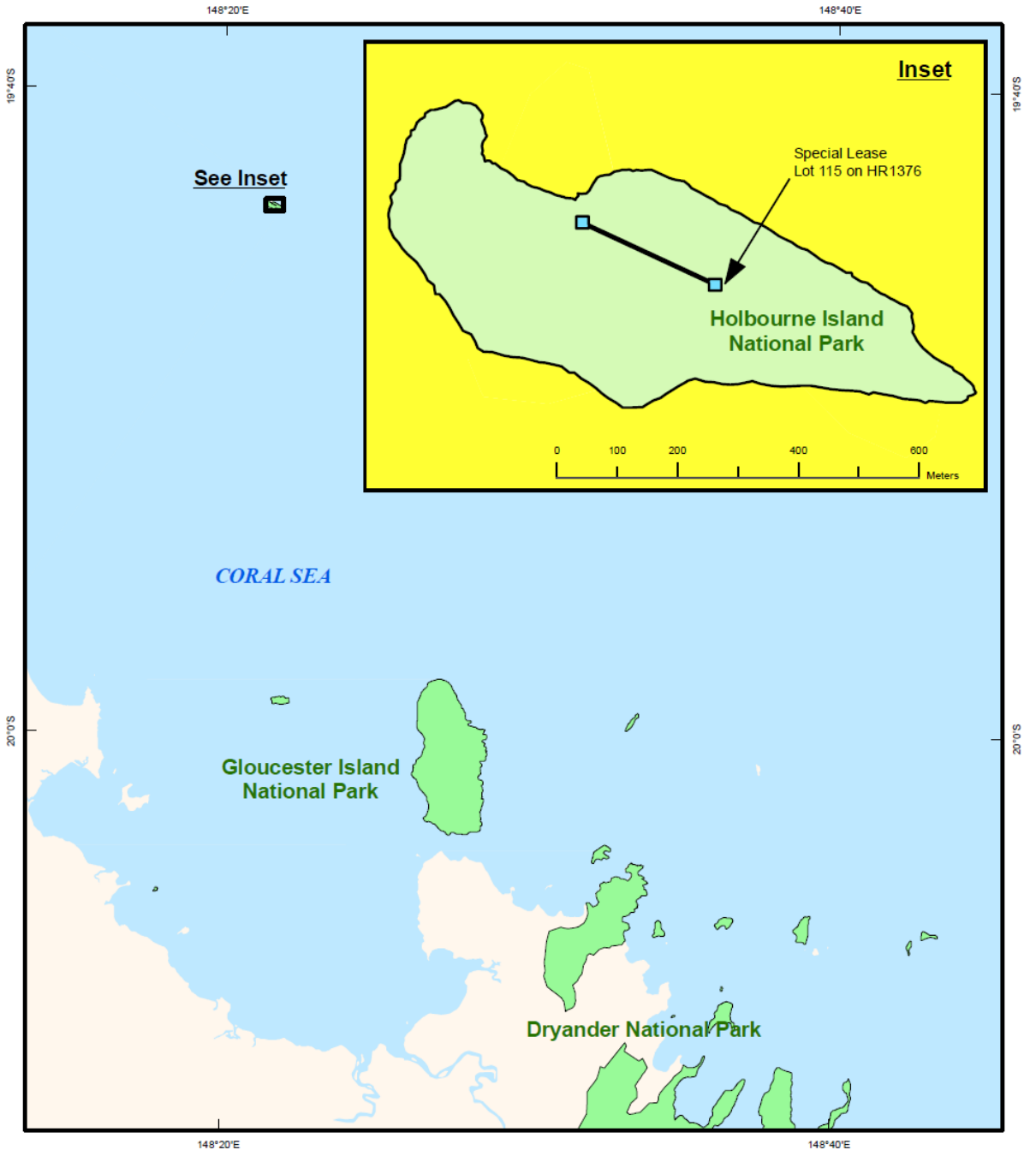
Kilometres

Queensland Government

Source Material:
•Regional Ecosystems Remnant Vegetation of Queensland, DERM; 2009
•Protected Areas of Queensland, DERM; 2010

Legend
Regional ecosystems
8.12.13a
8.12.26
8.2.2
8.2.9
Tenure
National Park

Map 4 Park management zones



Map Projection:
Universal Transverse Mercator (MGA) zone 55
Horizontal Datum:
Geocentric Datum of Australia 1994 (GDA94)

Map Production:
Spatial Services,
Queensland Parks and Wildlife Service,
Department of Environment and Resource Management.
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N

Scale
0 2.5 5 10 15 20
Kilometres

Queensland Government

Source Material:
•Protected Areas of Queensland, DERM; 2010
•State Marine Parks of Queensland, DERM; 2009

Legend

Management zones
Zone 1 - Remote natural
Zone 2 - Natural

Marine park
Conservation Park

DERM Tenure
National Park

Appendix B – Management zones and setting

The stated management characteristics and guiding principles below provide guidance; however, activities and structures remain subject to the provisions of the managing legislation and the management principles for national parks. Therefore, conserving nature and protecting cultural values remains the cardinal principle for the use of a national park. The presentation of an area's values is subject to these being protected, and any use of a national park must be nature-based and ecologically sustainable.

Table 1 – Management zone characteristics and principles

Note: 1. Appendix A, Map 4 shows the location of the zones on the park.

2. Park management will aim to achieve the stated zone characteristics.

3. Landscape classification system for visitor management describes the natural, social and managerial characteristics of a site as described in Appendix C.

4. Traditional use, emergency situations and management strategies may override the zone characteristics and will be assessed on a case-by-case basis.

5. Reference should be made to specific policies, guidelines and actions of the QPWS Whitsunday and Mackay Islands Visitor Management Strategy 2007 for further detail.

General description

This area applies to Holbourne Island National Park, exclusive of the dedicated leasehold area.

Pristine natural areas dominate with no evidence of modern human activity, offering a remote experience for visitors whilst protecting the area's natural and cultural values. To achieve this balance, public access over the island may occur in restricted numbers and on-foot. Vessel access to the adjoining waters may be undertaken by: a minority (maximum of three) of commercial tourist operators which do not encounter or enter the view-shed of other commercial tourism, management and other authorised personnel (for example, emergencies, research and lease activities consistent with this management plan). Island and intertidal access is to be restricted to all visitors and commercial tourism operators during the nesting and recruitment period for marine turtles and coastal birds, between 1 October and 31 March. During the seasonal closure period, the Australian Maritime Safety Authority and subcontractors will have restricted access to the navigational aid lease area and facilities for routine low-impact maintenance only. More intrusive forms of navigation facility access and activities is conditional on written notification to QPWS, 15 days prior to the schedule of activities, to assist park management.

ZONE 1 – Remote natural					
Management characteristics	**Management aims** Manage almost exclusively for conservation Provide for very low levels of visitation	**LCS settings *** Setting 1 No impact on the natural condition is noticeable.	**Expected levels of visitation** Low frequency by free and independent travellers Limited provision for commercial use in special circumstances[5]	**Public vehicle access** No provision for public vehicle access Island access to be undertaken by helicopter or on foot	**Pedestrian access / walking tracks** Minor evidence of partly formed walk in, natural foot trails and rehabilitating LARC vehicle track present No provision for further defining or extending existing access
	Day visitor facilities None existing or planned	**Signs and interpretation** None existing other than national park identification sign Signs may be installed where necessary for environmental purposes	**Campsites** No existing or future provisions for camping or facilities	**Visitor self-reliance** Very high	**Maximum group size** Recommended maximum group size of 6 people (where applicable)

Guiding principles Allowance for approved leaseholder activities under lease agreement, which support conservation management objectives consistent with this management plan.

General description

This area applies to the dedicated leasehold area.

Natural vegetation and landscapes dominate and are essentially unmodified. Evidence of modern human activity is limited to small areas and is relatively inconspicuous. The principal purpose of this zone is the use and maintenance of navigation aid infrastructure, with provision for conservation of natural and cultural values. Access to the leasehold area is to be restricted to all visitors and commercial tourism operators during the nesting and recruitment period for marine turtles and coastal birds, between 1 October and 31 March. The lease area is not to be purported as a place or destination for visitor recreation. During the seasonal closure period, the Australian Maritime Safety Authority and subcontractors will have restricted access to the navigational aid lease area and facilities for routine low-impact maintenance only. More intrusive forms of navigation facility access and activities is conditional on written notification to QPWS, 15 days prior to the schedule of activities, to assist park management.

ZONE 2 – Natural					
Management characteristics	**Management aims** Manage predominantly for operation of lease facilities and conservation Natural environments with minimal hardening Provide for low levels of visitation Co-ordinate fire management, bushwalking access and voluntary conservation measures	**LCS settings *** Setting 4	**Expected levels of visitation** Visits quarterly or on 'as needs' basis by lease arrangement for leasehold facility maintenance Low frequency by free and independent travellers No provision for commercial use other than in special circumstances[5]	**Public vehicle access** No provision for public vehicle access Island access to be undertaken by helicopter or on foot	**Pedestrian access / walking tracks** Minor evidence of partly formed walk in, natural foot trails and rehabilitating LARC vehicle track present No provision for further defining or extending existing access
	Day visitor facilities None	**Signs and interpretation** Limited, preferably at existing facilities	**Campsites** Not applicable	**Visitor self-reliance** Very high	**Maximum group size** Recommended maximum group size of 6 people (where applicable)
Guiding principles Allowance for approved leaseholder activities under lease agreement, which support conservation management objectives consistent with this management plan.					

Appendix C – Definitions

Aboriginal cultural heritage

Aboriginal cultural heritage is anything that is:

(a) a significant Aboriginal area in Queensland

(b) a significant Aboriginal object; or

(c) evidence, of archaeological or historic significance, of Aboriginal occupation of an area of Queensland.

Commercial use

Commercial use includes commercial tented accommodation, commercial reef walking tours, goods and services vending and hire. Tour operator access may be considered where the operator has advanced eco-certification; has demonstrated experience and capabilities to operate with minimal impact in sensitive areas; is prepared to contribute to park management at the site, for example, weed control, litter collection, wildlife monitoring etc; can demonstrate that the site provides a significant environmental or cultural education experience or management benefit; or can demonstrate that the activity cannot reasonably occur in another less sensitive locality.

Commercial activity

Any activity that is conducted for gain is considered a commercial activity and can be conducted only under a permit or agreement. Examples of commercial activities include the hire or sale of goods or services; supplying services or facilities; commercial photography and filming; undertaking a guided tour, safari, scenic flight, cruise or excursion; advertising or promoting the use of a protected area or recreation area as part of a tour, safari, scenic flight, cruise or excursion; and advertising or promoting the use of a protected area or recreation area as a feature associated with a resort or tourist facility.

Conservation Park (Yellow) Zone

The GBRMPA Conservation Park (Yellow) Zone allows for increased protection and conservation of areas of the Marine Parks, while providing opportunities for reasonable use and enjoyment including limited extractive use.

Endangered (regional ecosystems)

A regional ecosystem is listed as Endangered under the *Vegetation Management Act 1999* if:

- remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or
- 10–30 per cent of its pre-clearing extent remains and the remnant vegetation is less than 10 000 hectares.

In addition to the criteria listed for endangered regional ecosystems under the *Vegetation Management Act 1999*, for biodiversity planning purposes a regional ecosystem is listed with a DERM biodiversity status of endangered if:

- less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss*
- 10–30 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 hectares; or
- it is a rare* regional ecosystem subject to a threatening process*.

* refer to hyperlinks – Vegetation Management Act status and biodiversity status for further information.

Intertidal area

The Great Barrier Reef Coast Marine Park between low water and the landward boundaries of the Great Barrier Reef Marine Park (Commonwealth).

Landscape Classification Settings (LCS)

A setting is a term used to describe the character of a place, which takes into account its physical, social and managerial features. Settings on parks range from high-volume areas with signs, toilets and car parks to wild, remote locations. (EPA 2001)

A Landscape Classification Setting is a system, which is used to describe the natural, social and managerial characteristics of a site. Settings range from 1 (most natural) to 9 (most urbanised). See QPWS Operational Policy Landscape Classification System for Visitor Management.

Level One Pest Management Strategy

An optional (at the region's discretion) planning document that provides an overview and strategic direction at the bioregion or other sub-regional level. They are not equivalent to a Level One Fire Strategy and should not to be written for:

(a) an assessment a single pest species

(b) pest plants and pest animals

(c) all reserves in a single management unit.

Level Two Pest Management Strategy

The main system planning document that outlines what pests are present and guides on-ground pest management priorities and actions mostly within a single management unit. Although level two strategies will typically be written to cover all reserves in a single management unit they may also be written for any other sub-management unit aggregation of reserves including, if appropriate, a single large and complex reserve. Level two pest management strategies are not to be written:

(a) for a single pest species

(b) as separate documents for pest plants and pest animals.

Management principles for national parks

These are specified in Section 17 of the *Nature Conservation Act 1992*:

(1) A national park is to be managed to—

(a) provide, to the greatest possible extent, for the permanent preservation of the area's natural condition and the protection of the area's cultural resources and values

(b) present the area's cultural and natural resources and their values

(c) ensure that the only use of the area is nature-based and ecologically sustainable.

(2) The management principle mentioned in subsection (1)(a) is the cardinal principle for the management of national parks.

Protected area

An area of land or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

Vessel

Vessel is defined in the Great Barrier Reef Marine Park Act as a ship, boat, raft or pontoon or any other thing capable of carrying persons or goods through or on water, and includes a hovercraft.

The Marine Parks (Great Barrier Reef Coast) Zoning Plan 2004 has the same definition due to Section 3(2) of the zoning plan.

Zones

Zones are smaller units within the national park, established in order to prescribe individual management regimes to each based on the conservation of natural and cultural values, on presentation values, or managing hazards and visitor safety in the area. For the purposes of this plan, zones are described in Appendix D and outlined in Map 4.

Appendix D – Regional ecosystems

Table 1: Of concern and endangered regional ecosystem for Holbourne Island National Park.

Regional ecosystem number	Regional ecosystem name	DERM biodiversity status	Reason for status and the threats to ongoing sustainability
8.2.1	Mosaic of spinifex grassland, herbland and shrubland to low closed forest of Moreton Bay ash plus acacia and casuarina woodland on dunes and beaches.	Of concern	Potential for disturbance by unregulated access, fire, erosion and weed invasion. Vehicles and human traffic readily causes erosion and invasion by weed species. Removal of ground layer vegetation and/or alterations by weeds removes habitat for select fauna.
3.2.29	Pisonia grandis low closed forest restricted to a few scattered sand cays.	Endangered	Risk of impacts by fire and encroachment of weeds. Pisonia grandis is highly susceptible to degradation from cyclones, fires, insect attack and human disturbance. Protection relies on broad-scale management of surrounding country.
8.12.13a	Tussock grassland on exposed headlands on igneous rocks, with kangaroo grass, *xanthorrhoea* and scattered shrubs.	Of concern	A stable ecosystem covering the island slopes and headlands. The natural extent of this system is maintained more by geology and exposure rather than fire.
8.12.12d	*Corymbia clarksoniana*, C. *tessellaris*, *Eucalyptus platyphylla* ± *C. dallachiana* ± E. *drepanophylla* ± E. *tereticornis* woodland to open-forest on lower to medium hills on mesozoic to proterozoic igneous rocks.	Of concern	Emphasis should be placed on the general principles of mosaic burning and diversity of fire types.

Appendix E – Significant animal species

Table 1: Endangered, vulnerable or near threatened animal species listed for Holbourne Island National Park.

Scientific name	Common name	Status under the *Nature Conservation Act 1992*	Status under the *Environment Protection and Biodiversity Conservation Act 1999*	DERM Back on Track species prioritisation framework (BOT)
Natator depressus	flatback turtle	Vulnerable	Vulnerable	Critical
Chelonia mydas	green turtle	Vulnerable	Vulnerable	Critical
Haematopus fuliginosus	sooty oystercatcher	Near threatened	-	Low
Temporena whartoni (Cox 1871)	endemic snail	-	-	-

Table 2: Native animal and bird species listed in International Agreements on Holbourne Island National Park.

Scientific name	Common name	BONN	JAMBA	ROKAMBA	CAMBA
Animals					
Chelonia mydas	green turtle	✓			
Natator depressus	flatback turtle	✓			
Birds					
Haliaeetus leucogaster	white-bellied sea-eagle		✓		
Pandion cristatus	eastern osprey	✓			
Fregata ariel	lesser frigatebird		✓	✓	✓
Thalasseus bengalensis	lesser crested tern		✓		
Onychoprion anaethetus	bridled tern		✓	✓	
Sterna dougallii	roseate tern			✓	
Anous stolidus	common noddy		✓	✓	
Sterna sumatrana	black-naped tern		✓	✓	
Sula leucogaster	brown booby	✓	✓	✓	✓