

Management plans



Brook Islands National Park and Goold Island National Park

Townsville/Whitsunday Marine Park planning area

October 1999



**QUEENSLAND
PARKS AND
WILDLIFE
SERVICE**

Summary

This management plan provides the framework and guidelines on how Brook Islands and Goold Island National Parks will be managed. It sets out the considerations, outcomes and strategies that are proposed to form the basis on which day-to-day management decisions are made.

This plan was prepared in September 1999 and, in accordance with the *Nature Conservation Act 1992*, will be reviewed not later than 10 years after its approval. For further information on this plan or the planning process, please contact the Planning Officer, Northern Region, Queensland Parks and Wildlife Service, PO Box 5391, TOWNSVILLE MAIL CENTRE QLD 4810, or telephone (07) 4722 5250 during business hours.

This publication was prepared by the Queensland Parks and Wildlife Service and the Great Barrier Reef Marine Park Authority and coordinated by Dr P Lavarack (QPWS) and Mr JW Muldoon (GBRMPA).

Cover photograph: Western Beach on Goold Island

For information on protected area management plans, the QPWS and EPA visit our web site www.env.qld.gov.au

ISBN 0 7242 4842 0

© State of Queensland, QPWS, and the Commonwealth of Australia, GBRMPA. Copyright protects this publication. Except for purposes permitted by the Copyright Act, reproduction by whatever means is prohibited without the prior written permission of the Queensland Parks and Wildlife Service. Direct enquiries to PO Box 155 BRISBANE ALBERT STREET QLD 4002.

RE97

Recycled paper saves energy and resources

Contents

I Introduction	1
2 Basis for management — Brook Islands and Goold Island National Parks	
2.1 Regional context	3
2.2 Planning area	3
2.3 Planning process	3
2.4 Management obligations	3
2.5 Native title obligations	4
3 Brook Islands management plan	6
3.1 Directions and purposes	6
3.2 Values	6
3.3 Management strategies	8
3.3.1 Natural resource management	8
3.3.2 Landscape management	9
3.3.3 Native title	10
3.3.4 Cultural heritage management	10
3.3.5 Recreation, tourism and visitor use	11
3.3.6 Public utilities	11
3.3.7 Education and interpretation	12
3.3.8 Research and monitoring	12
4 Goold Island management plan	15
4.1 Directions and purposes	15
4.2 Values	16
4.3 Management strategies	17
4.3.1 Natural resource management	17
4.3.2 Landscape management	18
4.3.3 Native title	19
4.3.4 Cultural heritage management	19
4.3.5 Recreation, tourism and visitor use	20
4.3.6 Public utilities	21
4.3.7 Education and interpretation	22
4.3.8 Research and monitoring	23

5 Bibliography	24
-----------------------	----

Appendix A

Summary of permitted use of Brook Islands and Goold Island National Parks.	25
--	----

Maps

Map 1	Dunk Island to Hinchinbrook Island	2
Map 2	Brook Islands	5
Map 3	Goold Island	14

I Introduction

This document contains management plans for the Brook Islands and Goold Island National Parks. Together with the Family Islands and Hinchinbrook Island, these island national parks provide an important recreational resource and a vital area conserving natural and cultural resources. Management of resources requires co-ordination of these different national parks and their surrounding waters. A plan for Hinchinbrook Island National Park has been developed in conjunction with these plans and one for Family Islands National Park is being prepared. In addition, a Regional Coastal Management Plan for the Hinchinbrook and Cardwell Shires, which will include the waters surrounding these parks, is being prepared by the Queensland Parks and Wildlife Service (QPWS). The Great Barrier Reef Marine Park Authority (GBRMPA) is preparing a management plan for the Hinchinbrook Planning Area of the Central Section of the Great Barrier Reef Marine Park.

The original draft plan, which was released for public comment in August 1996, considered the fringing reefs and other marine issues as well the southern part of the Family Islands National Park. However, the draft plan for the southern Family Islands is a plan for only part of the park as it now exists under the *Nature Conservation Act 1992* and needs to be re-written. Marine areas which are not part of protected areas cannot be included in these final plans and will be covered separately as detailed above.

Brook Islands and Goold Island National Parks are part of the Great Barrier Reef World Heritage Area. This obliges QPWS to manage the area with World Heritage values to the forefront.

The Brook Islands are low and rocky — North Brook has a maximum altitude of 62m, and South Brook a maximum of 42m. They are covered in a dense vine-forest. Their eastern shores are rocky while their western shores feature a few beaches of coarse sand and coral rubble. The islands support a well-documented breeding colony of more than 40 000 pied imperial-pigeons and significant breeding colonies of bridled terns, black-naped terns, little terns and roseate terns. Beach stone-curlews, a vulnerable bird species, are also present and are believed to breed on North Brook Island beaches.

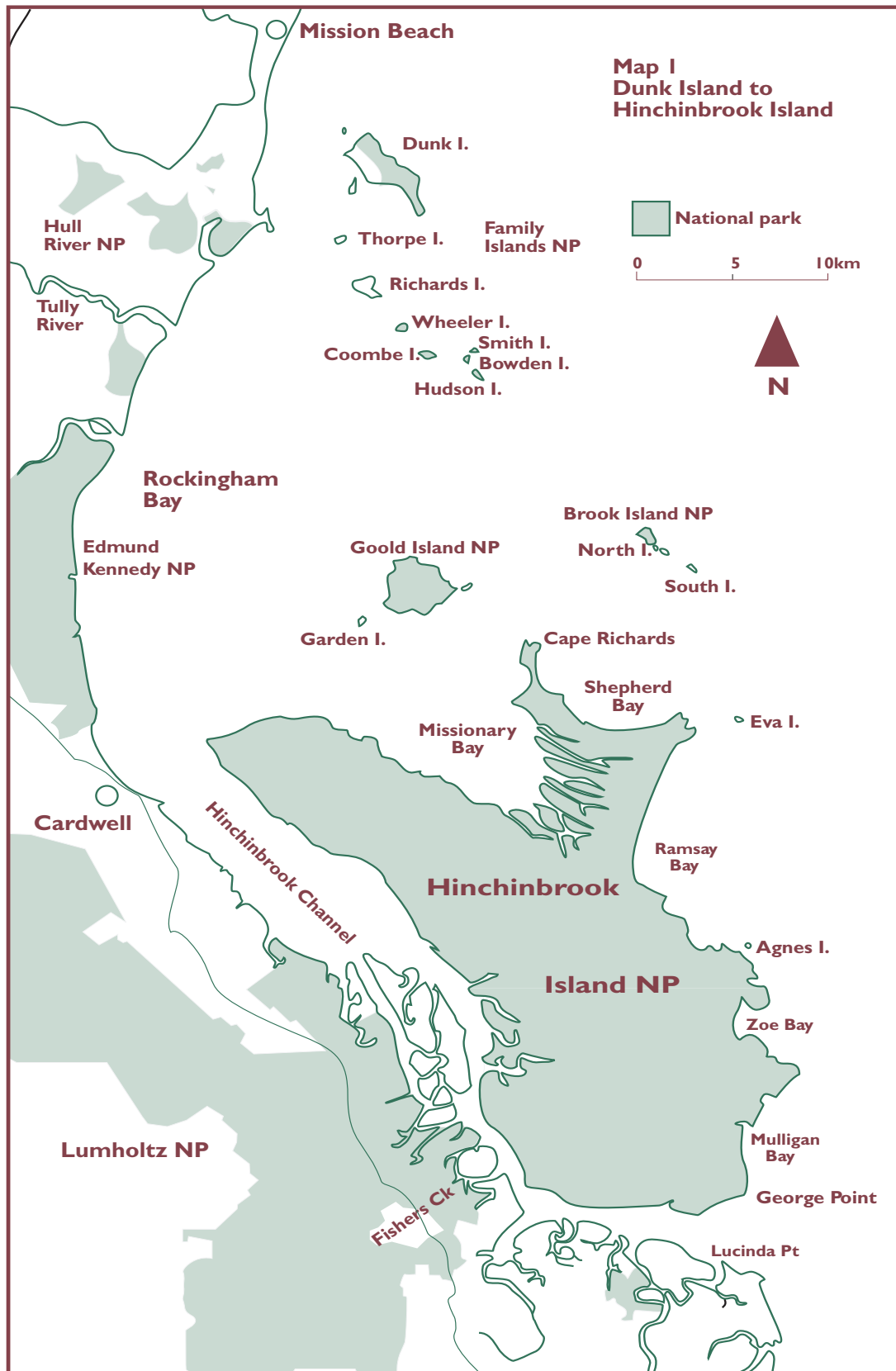
The area is attractive to weekend boat users from Cardwell and Lucinda and to a range of tourist operators. The fringing reefs provide the best inshore coral viewing close to Cardwell, although access is often restricted because of weather conditions. There is little evidence of human occupation. North Brook Island was used for a few months in 1944 for mustard gas experiments, but virtually no trace of this remains. There is little known evidence of Aboriginal use.

Goold Island is covered in open forest dominated by eucalypts and wattles and has a developing understorey of rainforest species in some parts. Rainforest occurs in some sheltered gullies where fire rarely penetrates. An interesting stand of mangroves lines the estuary of a creek on the island's southern side. Two or three creeks on the island carry water for most of the year and one flowing to the southern beach is almost permanent. The coast is mostly rocky, but sandy beaches occur in two locations on the west and south coasts. Some coral reefs occur on the south-western and eastern areas in particular, but little is known about these.

Goold Island has been popular with campers and fishers since Cardwell was settled in 1865, and before that was used by Aborigines, who relied heavily on the marine environment. Heavy recreational use over many years has impacted on the spit area, eroding the beach and opening the vegetation around camping sites.

Both national parks are areas of cultural and spiritual significance to the descendants of the original inhabitants. There are several tangible reminders of their lifestyle in the form of middens and stone fish traps. The history of the Aboriginal people of the area is a sad one — the population was almost wiped out by conflict with early European settlers and by indirect means such as the introduction of diseases.

An important aspect in evaluating these plans is that no one small island, or group of small islands, can accommodate a wide variety of recreational opportunities or a large number of visitors. Therefore it is important to consider the recreational opportunities of the whole area, as well as those of the individual parts. The area as a whole supports a diverse range of recreational opportunities ranging from high profile resorts to bush camping. Individual sites can provide only a small range of these opportunities and strict controls are required to ensure that inappropriate activities or excessively large numbers do not impact on sensitive sites.



2 Basis for management

2.1 Regional context

The Brook Islands (Map 2) is a group of four continental islands and a few rocks located about 7km north-east of Cape Richards on Hinchinbrook Island and about 30km from the nearest mainland town of Cardwell. The largest is North Brook Island (65ha) and the smallest Tween Island (6ha). North, Tween and Middle Brook Islands were first gazetted as national parks in 1936. South Brook Island is a Commonwealth Lighthouse Reserve and forms part of the Great Barrier Reef Marine Park.

Along with the Family Islands, most of which are national parks, the Brook Islands form an arc of islands enclosing the semi-sheltered waters of Rockingham Bay. Being so far out to sea, the islands are in an exposed position and this has resulted in a lower level of use than most similar islands closer to the mainland. They support the best fringing reef accessible from Cardwell and Mission Beach.

Goold Island lies in the centre of Rockingham Bay, about 15km north east of Cardwell. It is a high (409m) forested island covering 829.6ha and is surrounded by other national park islands in the Family Group, the Brook Islands and Hinchinbrook Island. This is a strategic and very visible location. The large, attractive, sheltered Western Beach is popular with visitors from the local community and from further away.

The intertidal areas around both national parks are part of the Townsville/Whitsunday State Marine Park, while the reefs and waters around the islands are part of the Central Section of the Great Barrier Reef Marine Park. They are zoned Marine National Park B.

2.2 Planning area

The planning area comprises Brook Islands National Park, consisting of North Brook Island, Middle Brook Island and Tween Brook Island; and Goold Island National Park.

South Brook Island, which has a navigation aid situated on it, is not part of the planning area as it is owned by the Commonwealth Government. Garden Island, which lies close to Goold Island, is also not part of the planning area as it is a recreation reserve under Cardwell Shire Council control.

2.3 Planning process

This management plan has been developed by the Queensland Queensland Parks and Wildlife Service.

The purpose of the plan is to propose clear directions for managing the Brook Islands and Goold Island National Parks. To do this, detailed management actions are set out where necessary.

In accord with s113 of the *Nature Conservation Act 1992*, advertisements giving notice of the publication of a draft plan were published in newspapers in August 1996, inviting public comment. Thirty-seven submissions were received from a variety of individuals and interest groups and their comments were used in preparing this final plan.

2.4 Management obligations

Brook Islands and Goold Island National Parks are designated under the *Nature Conservation Act 1992* and will be managed according to the principles set out in s17.1 of the Act:

- to 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;
- to present the area's cultural and natural resources and their values; and

- to ensure that the only use of the area is nature-based and ecologically sustainable.

Aboriginal cultural heritage sites and places are also protected under provisions of the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*. Sites and places of cultural heritage significance, which are not significant solely through association with Aboriginal tradition, are protected under provisions of the *Queensland Heritage Act 1992*.

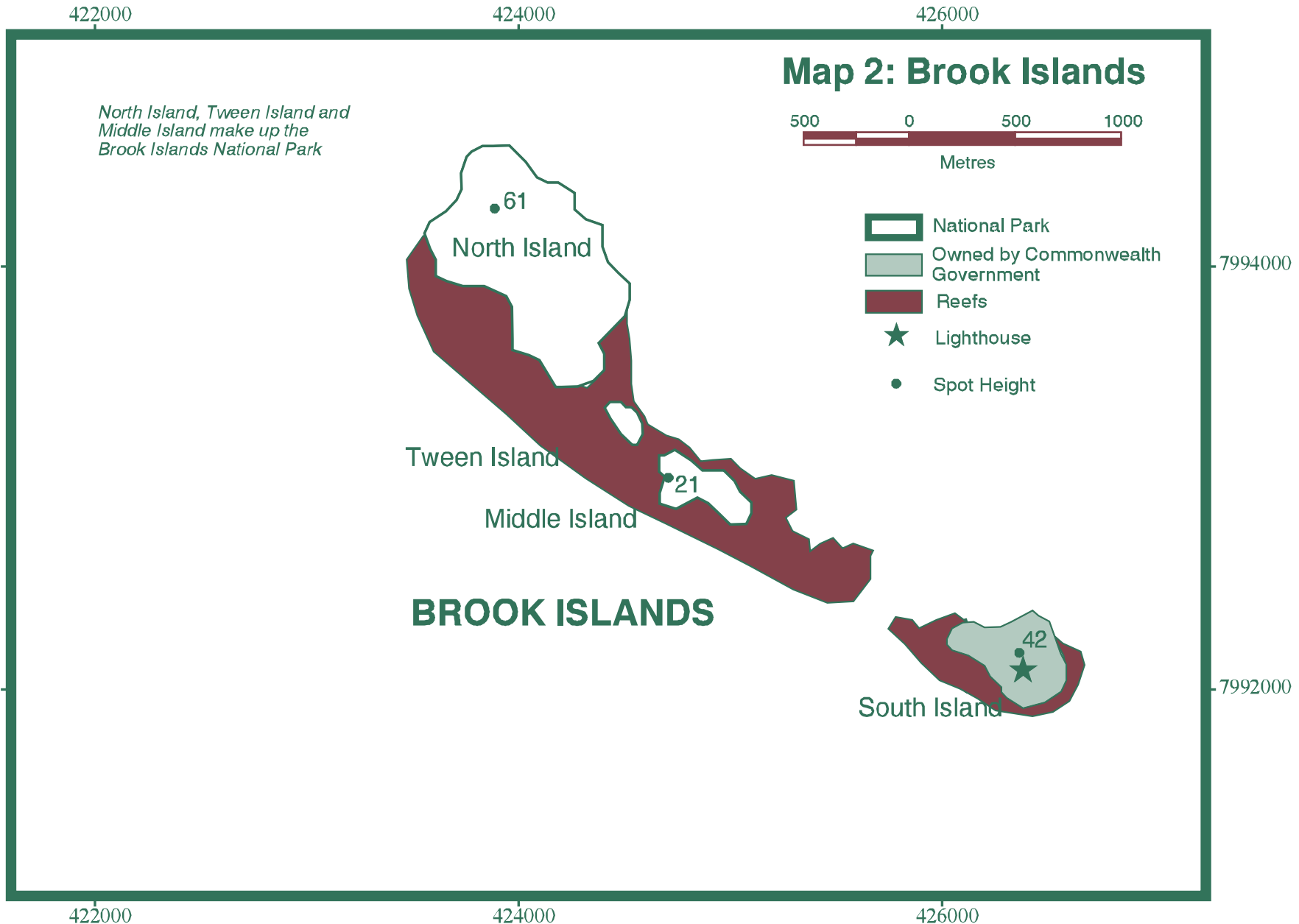
The Brook Islands and Goold Island lie within the Great Barrier Reef Region, which was inscribed on the World Heritage List in 1981. Listing obliges managers to 'protect, conserve, present, rehabilitate and transmit to future generations the Great Barrier Reef World Heritage Area, within the meaning of the World Heritage Convention'.

The requirements of other legislation administered by QPWS and other departments will be met where necessary.

2.5 Native title obligations

There were no formal native title claims over Brook Islands and Goold Island National Parks at the time of writing this plan, however native title may exist.

The Commonwealth *Native Title Act 1993* provides for the recognition and protection of native title. The plan does not intend to affect, diminish or extinguish any native title rights.



3 Brook Islands National Park management plan

3.1 Directions and purposes

Directions

Brook Islands National Park will be managed to ensure North, Middle and Tween Islands remain in an undisturbed condition with virtually no impact from human sources. This will allow the islands to be used as a reference site. In particular the vegetation, seabirds and pied imperial-pigeons will be allowed to continue to exist without disturbance, other than some small impact from necessary research. Landscape values will remain at their present high levels.

In managing the Brook Islands opportunities will be provided for Aboriginal people and the community to be involved in, and consulted about, decisions concerning the national park's future.

Purposes

The purposes of management will be to ensure that:

- natural processes continue undisturbed on the islands;
- low-impact research and monitoring provides information useful or potentially useful for managing the islands' natural communities and cultural resources;
- the public understands the importance of the Brook Islands as a reference site;
- the cultural and spiritual values of the Brook Islands are not damaged or destroyed; and
- Aboriginal groups have an input into decisions affecting their particular interests.

3.2 Values

Nature conservation

Although the Brook Islands are only part of the Great Barrier Reef World Heritage Area, they meet the four criteria of outstanding universal value as set out in the World Heritage Convention. That is, the island group is:

- an example of a major stage of the earth's evolutionary history;
- an outstanding example of geological processes, biological evolution and people's interaction with their natural environment;
- a place with unique, rare and superlative natural phenomena; and
- a place which provides habitats for rare and endangered species of plants and animals.

The major values of the Brook Islands National Park are described below.

Island landscapes

The Brook Islands remain one of the few undisturbed island groups between the Whitsunday Islands and Cairns, possibly because they are relatively remote and in an exposed location. Many other islands in this area have been heavily affected by human use over the last century, yet there is little evidence of disturbance to the ecosystems of the Brook Islands and reefs. The present biota of the Brook Islands is likely to be close to its natural condition.

The Brook Islands, along with Hinchinbrook Island, Goold Island and the Family Islands, are an integral part of the landscape of Rockingham Bay. The islands' small size and their relatively isolated location, lush tropical vegetation, undisturbed appearance, and sandy beaches fringed with dense vegetation have resulted in a landscape of nationally significant appeal.

Native birds

The occurrence of breeding colonies of pied imperial-pigeons, seabird and shorebird nesting sites and rookeries and the presence of coastal raptors make these islands especially important in a regional and national context.

Between October and March, the Brook Islands are home to a large colony of pied imperial-pigeons which migrate south from New Guinea to breed. The birds roost overnight and nest on the islands, in particular North Brook, from where they commute regularly to Hinchinbrook Island and the mainland to feed on rainforest fruits.

Colony numbers declined to fewer than 2000 in 1968, due to frequent illegal shooting. Yet by 1995, the colony size was estimated to be about 40 000. A regular monitoring program has been carried out for more than 25 years (Thorsborne, Thorsborne and Winter 1988). This is the southern-most large colony of these birds. The nearest colony of equivalent size is at Low Isles, north of Cairns.

The Brook Islands are an important nesting site for four species of terns (Thorsborne and Thorsborne 1987). Bridled terns nest in a large colony on the rocky eastern shore of North Brook Island.

Approximately 100 pairs of black-naped terns nest on North Brook and 150–200 on South Brook (Thorsborne and Thorsborne 1987). The nesting area varies from year to year but is often near the sandspit where the cleverly camouflaged eggs, laid in depressions on the beach, are often disturbed, even by well-intentioned visitors. This colony is especially significant as the other local colonies at Purtaboi Island and Beaver Cay have been threatened by uncontrolled use in the past.

A few pairs of roseate terns and little terns also nest on the beaches. The little tern is classed as vulnerable. Nesting of these birds coincides with the pigeon nesting between October and March. About 100 bridled terns nest on the south end of Smith Island in the Family Islands National Park.

White-bellied sea-eagles and ospreys use the islands as nesting sites. The beach stone-curlew, once a common bird, is now classed as vulnerable and might be reduced to less than 1000 individuals Australia-wide. It breeds on North Brook Island.

Vegetation

The plants of the Brook Islands are only partly known (Fell 1988). North Brook Island's predominant vegetation is a lush, well-developed rainforest with many vines (notophyll vine forest), likely to include some rare and interesting species. Humans, feral animals, and weeds and fires have had less effect on the islands than on the mainland. This has ensured the islands remain as important representative samples of island ecosystems.

North Brook's vine forests feature some very dense areas of the rare palm *Arenga australasica*. Although this palm is abundant on these small islands, it is rare on the mainland. Golden orchids *Dendrobium discolor* are abundant on the rocks near the shoreline. The vine forests are poorly known, but appear not to have been subject to fire for a long time and are likely to prove botanically interesting when fully investigated. Many of the plants appear to indicate a relationship to the pied imperial-pigeons which regularly transport seed considerable distances and thus, it would appear, enrich the islands' species diversity. Common canopy species include *Semecarpus australiensis* (tar tree), *Palaquium galactoxylon*, *Myristica insipida* and *Alstonia scholaris*.

The vegetation on the sandspit of North Brook Island is particularly well-developed compared with similar locations in the area.

Cultural values

There is little physical evidence of Aboriginal use of the Brook Islands, but it is certain that Aborigines would have paddled bark canoes regularly to the islands to use their rich reef resources. These islands, in common with many other areas, were of cultural and spiritual significance to the Aboriginal people of the area and undoubtedly retain this significance today.

Recreation and tourism

This plan's strategy to restrict public access to the national park will mean people will no longer be able to use the islands' beaches and other recreation attractions.

However, from a distance, tourists will still be able to appreciate the vista of small, uninhabited, generally untouched islands.

The islands' beauty adds to the attraction of diving or snorkelling the reef along the islands' western sides. This is the best inshore reef within reach of the tourist centre of Cardwell.

Because the Brooks are fairly close to Cardwell, tourists boating on Rockingham Bay might also be able to enjoy the seasonal evening spectacle of pied imperial-pigeons returning to the islands after foraging for food on the mainland. This spectacle occurs between October and March — the pigeons migrate to New Guinea for the rest of the year.

Educational and scientific values

Pied imperial-pigeon numbers have been studied since 1964. Results have shown the population can recover from heavy illegal shooting pressure. The Brooks have potential to be a good locality for research on seabird nesting.

Some preliminary work has been carried out on the islands' plant communities. This indicates they are possibly of scientific interest and should be studied further.

3.3 Management strategies

3.3.1 Natural resource management

Background information

The natural values and historically low use of the Brook Islands mean this small group provides the most significant opportunity for conserving small island and reef ecosystems between the Whitsundays and Cairns. Therefore, it is especially important here to ensure the natural ecosystems have minimal human interruption.

While past research has provided much vital information on pigeons and seabirds, this research must be maintained to acquire more information. This is particularly true for the beach stone-curlew population.

The vegetation of the islands is still poorly known. Some preliminary results indicate it is interesting botanically and more research is required.

Weeds do not present a major problem at this time. However, there is an expanding colony of coconut trees on North Brook Island. Available evidence indicates coconut trees probably were not present on the Brook Islands before Europeans arrived. In most places, Service practice has been to tolerate coconut trees' presence because their original existence is uncertain and public opinion strongly favours them. They are difficult to remove, and many members of the public see them as a highly desirable part of

the landscape. In the life of this plan, existing trees will be permitted to remain and reproduce in the area in which they currently exist, but coconut seedlings will be removed from new areas.

The islands appear not to have had a recent fire history and would be vulnerable to fire, particularly after cyclone damage.

Scientific research is a vital tool in understanding and maintaining the Brook Islands. However, unnecessary manipulative research can also be a threat to fragile communities. The islands and reef are a limited system and the quantity of research can affect them.

Desired outcomes

The nesting populations of pied imperial-pigeons, beach-nesting seabirds and beach stone-curlews are maintained at least at current levels.

The current composition, distribution and condition of the islands' natural terrestrial ecosystems are maintained, subject to natural change.

Guidelines and actions

- Keep the park in as natural condition as possible.
- Declare the park a restricted access area (no private or recreational use without a permit). To ensure native title is not affected by declaring this a restricted access area, allow people with an interest in land under section 69 of the *Nature Conservation Act 1992* to access the national park. Issue permits accordingly.
- Amend the Nature Conservation regulation so that no commercial scenic aircraft flights are permitted to fly over the national park. Flights for filming may be permitted at the discretion of the district manager. Flights for management purposes or emergency situations are not covered by this provision.
- Revise the Central Section Zoning Plan to make the Brook Islands an area to be avoided by aircraft. Exclude emergency situations from this restriction.
- Survey the islands for introduced animals and plants; remove any found (where feasible); and take steps to ensure no more are introduced.
- Allow existing coconut trees on North Brook Island to remain and reproduce naturally in their immediate vicinity. Prevent coconuts from establishing in areas where trees do not exceed three metres in height.
- In any future planting or revegetation work, use only seeds or other propagating material from the island on which the work is carried out.
- If numbers of pied imperial-pigeons or beach-nesting seabirds consistently decline, undertake research to determine the cause. If the fall is attributed to human use of some form, establish measures to reverse trends. These measures could involve reducing permitted use or increasing patrols to enforce legislation, provisions of this plan, or any other measures as required.
- A study of beach stone-curlews will be commissioned to look at distribution, numbers, breeding season and tolerance of human impact on breeding.
- Ban all fires on the islands. Do not undertake any controlled burning.
- If monitoring identifies any significant changes to the islands, try to establish the cause. If humans are found to be contributing to the changes, alter permitted use levels, increase patrols, or take any other necessary actions to reduce their impact.

3.3.2 Landscape management

Background information

Brook Islands National Park consists of small isolated islands with a largely unaltered visual appeal. The only non-natural element in the landscape is the navigation aid which is not on the national park and is not intrusive when viewed from the normal approach from Cardwell, the Family Islands or Hinchinbrook Island.

Desired outcome

The area's landscape values are maintained.

Guidelines and actions

- Do not issue permits for buildings or other structures. (See also section 3.3.5 and 3.5.6 below.)
- Do not issue permits for recreational activities, such as paraflying, which are likely to impact on the islands' visual surrounds.
- Do not construct infrastructure on the national park, other than necessary signs.

3.3.3 Native title

Background information

There are no formal native title claims over Brook Islands National Park at the time of writing this plan, however native title may exist.

Desired outcome

Any native title rights which may exist over this national park are not adversely affected by this management plan.

Aboriginal people with a particular interest in the area are involved in decision making concerning matters in which they have an interest.

Guidelines and actions

- Consult with relevant Aboriginal people to establish principles and guidelines for cooperative management of native title, cultural heritage and other issues.
- Work programs and management activities will consider the requirements of native title legislation to ensure native title rights are not compromised.

3.3.4 Cultural heritage management

Background information

No cultural resource surveys have been undertaken on these islands but, as there are cultural sites on many islands off the Queensland coast, some might exist on the Brooks. The restricted access area proposed for North, Middle and Tween Islands will prevent humans disturbing any sites there.

The islands are believed to have held particular significance to local indigenous people for their cultural and spiritual values. These values remain important to descendants of the original inhabitants.

Desired outcomes

Places of cultural heritage significance of Aboriginal and non-Aboriginal origin are protected from accidental or deliberate disturbance or destruction and are conserved for future generations, consistent with the wishes of traditional custodians and principles established in the Burra Charter.

Aboriginal interests are recognised and reflected in the management of issues which may affect cultural heritage matters on the park.

Guidelines and actions

- Develop cultural resource management plans and programs for identified sites in consultation with Aboriginal people connected to the area and relevant users. Interpret the islands' cultural heritage in culturally sensitive ways, in accord with the latest information derived from research, and in association with relevant Aboriginal groups.
- Train staff to recognise sites and understand Aboriginal culture.
- Monitor the condition of cultural heritage places and address unexpected or undesirable changes.
- Encourage research into the islands' cultural heritage.
- Permit traditional Aboriginal use of the national park, subject to approval by the relevant Aboriginal group (note this applies only to traditional use, not to commercial or recreational use).

3.3.5 Recreation, tourism and visitor use

Background information

The Brook Islands have been identified as the best opportunity for conserving island natural values in the region, but they also have a potentially high recreation value.

The plan's desired outcomes which relate to protecting nesting birds and maintaining terrestrial ecosystems are of overriding importance. The Brook Islands are considered to offer the best opportunity in the region to preserve a complete group of islands in an undisturbed condition.

As land access to these islands will be denied, opportunities will be made available in other places such as Gould Island, Garden Island and probably South Brook Island. (Use of South Brook Island will be subject to provisions of the proposed management plan for the Hinchinbrook Planning Area of the Central Section of the Great Barrier Reef Marine Park and provisions of the associated management plan being developed under State Marine Parks legislation. Provisions of the proposed Cardwell-Hinchinbrook Regional Coastal management plan will also affect use of this island. Garden Island is a reserve under the control of the Cardwell Shire Council.)

Desired outcomes

Visitors have no impact on North, Middle and Tween Brook Islands.

Information advising visitors of the area's national park status and its natural values is provided.

Guidelines and actions

- Use legislation to prohibit recreational use of North, Middle, and Tween Islands (including the beaches).
- Allow minimal signs on the islands, but not visitor facilities (as these would not be required or appropriate).

3.3.6 Public utilities

Background information

As there is a navigation aid on South Brook Island and space for other utilities, it is unlikely there will be a need for transmission towers or navigation aids on any of the national park islands. Any proposals to construct these on the national park would be subject to the provisions of the *Nature Conservation Act 1992* (Section 35). These require that the cardinal principle for the management of national parks is followed to the greatest possible extent; the use must be in the public interest; the use must be ecologically sustainable; and there must be no reasonably practicable alternative. As the island is part of the Great Barrier Reef World Heritage Area, and is listed on the Register of the National Estate,

obligations associated with these listings must also be considered before any such development can be approved.

Desired outcome

The landscape of Brook Islands National Park is free from major or obvious intrusions.

Guidelines and actions

- Carry out detailed environmental impact assessments for all proposals for public utilities. Grant approval only if it can be shown that the proposal meets the requirements of the relevant legislation (both State and Commonwealth), is vital to public safety, and no feasible alternatives exist.

3.3.7 Education and interpretation

Background information

As landing on Brook Islands National Park is to be prohibited, interpretation will mainly be needed to advise the public of the closure and the reasons for it.

Regulatory notices explaining that access has been limited will be needed in obvious landing areas on the islands.

As tourist use of the fringing reef will place visitors near the islands, some interpretation of the nature of the islands will still be required. This material should make special reference to the pied imperial-pigeons. This interpretive program should be carried out at major departure points for the island — Hinchinbrook Island, and Mission Beach — and will also be provided in the Rainforest and Reef Centre display at Cardwell.

Desired outcome

The public understands the need for responsible use of the area, knows the national park is closed to visitors and understands the reasons for this.

Guidelines and actions

- Provide interpretation and education off-site.
- Produce an information sheet and distribute it to places like yacht clubs and information centres to make the public aware of the closure and reasons for it.

3.3.8 Research and monitoring

Background information

To conserve the habitats of the Brook Islands extensive information on biological processes is needed. While research is important for managing the islands and reefs, the areas involved are small and research itself might have an unacceptable impact. Baseline surveys are needed of the area's natural and cultural resources.

Preliminary surveys indicate the vegetation is of scientific interest and is likely to include rare and threatened species.

There will be a continuing need to monitor the impact of research and monitoring and natural change on the islands. Techniques should be simple and carried out and processed by field staff where possible.

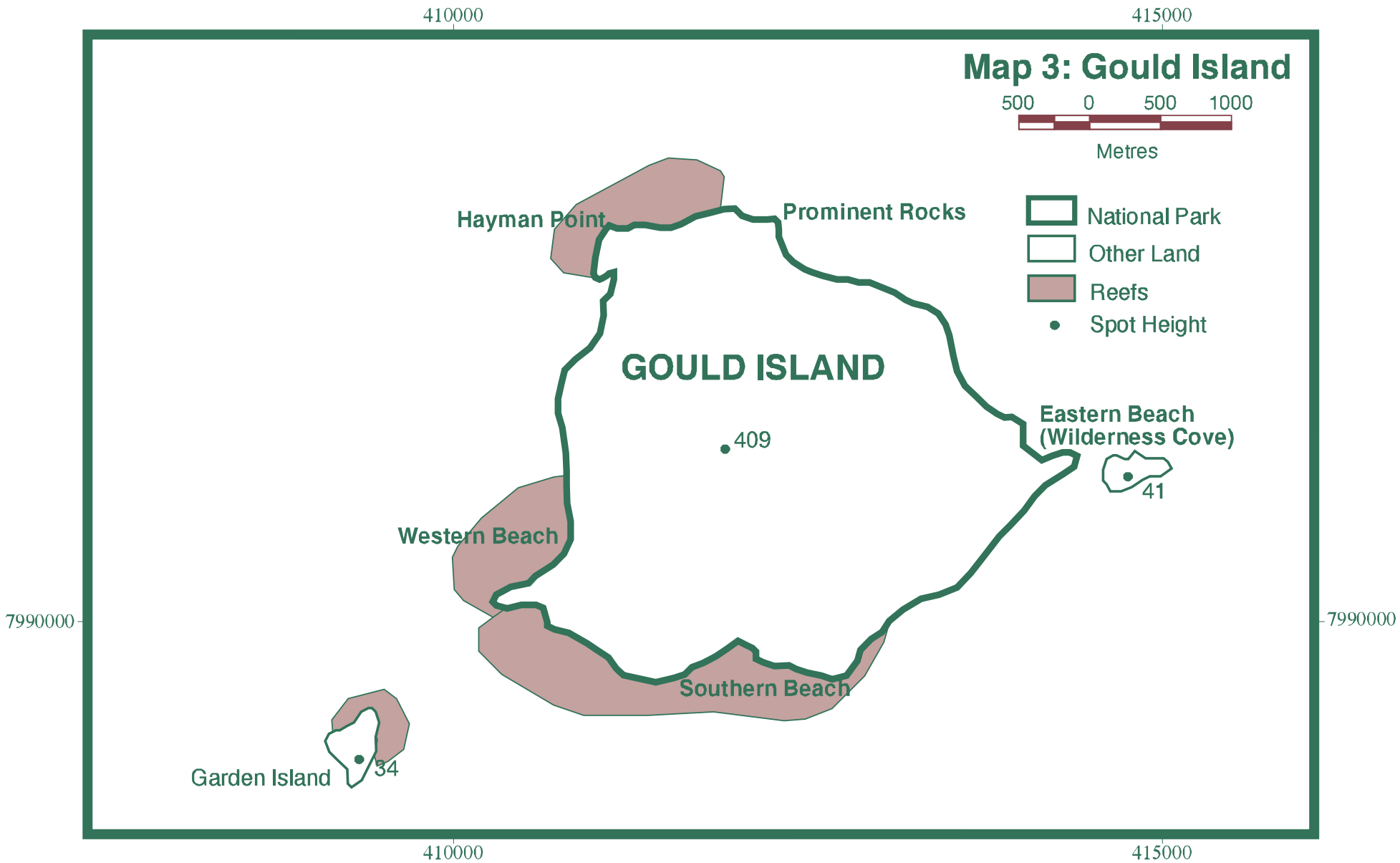
Desired outcomes

Opportunities for low-impact research which contributes to baseline information on the resources of the park and park management are encouraged.

A monitoring plan which measures significant changes to island ecosystems and identifies their causes is established.

Guidelines and actions

- Encourage and support a thorough botanical survey of all the Brook Islands.
- Ensure annual pigeon counts on the Brook Islands continue.
- Extend the counts to South Brook Island and to the beach-nesting tern species, particularly on North Brook Island.
- Advise universities and other research institutions of opportunities for research.
- Where appropriate, monitor the impact of major research projects by means such as fixed point photography or surveys involving transects.
- As a general principle, do not issue permits for research which involves structures or destructive sampling techniques.



4 Goold Island management plan

4.1 Directions and purposes

Directions

The conservation of the natural, cultural and scenic resources of Goold Island and its adjacent waters will be the highest management priority, but sustainable recreational use will continue. Over most of the island, self-reliant, nature-based and ecologically sustainable recreation will predominate and the natural environment will be conserved and remain largely undisturbed. The most notable exception will be on Western Beach where nature-based recreational activities will be encouraged by providing facilities.

With the exception of the developed area of Western Beach, all visitor activity and services will be designed to have minimal impact on the natural environment. A very large part of the park will be managed for its remote and natural values. The emphasis will be on helping visitors appreciate and learn about the area's environment.

Goold Island is part of the Great Barrier Reef World Heritage Area. A major direction of this plan is to ensure that the international obligations which come with World Heritage listing are fulfilled. (See section 2.4.)

In managing Goold Island, opportunities will be provided for Aboriginal people and the community to be involved in decisions concerning the national park's future.

Purposes

The purposes of management will be to ensure:

Conservation:

- species of conservation significance, vegetation and animal habitats are protected from the impacts associated with increasing human use;
- a fire plan is developed to maintain the range of vegetation communities;
- identified rare or threatened species such as the beach stone-curlew are studied and any necessary conservation measures identified and started;
- visitor use is monitored and controlled to protect sensitive communities or species; and
- natural communities are protected from the effects of introduced species.

Recreation and tourism:

- Western Beach is available and managed for moderately heavy use to cater for day visitors and campers;
- the remainder of the island is treated largely as a remote area; and
- the effectiveness of limited visitor numbers are monitored and adjusted from time to time.

Education and research:

- relevant scientific research and educational visits are encouraged where they are compatible with the park's major management objectives.

Native title and cultural heritage:

- the cultural and spiritual values of Goold Island are not damaged or destroyed;
- Aboriginal groups have an input into decisions affecting their interests;
- cultural resources such as the stone fishtraps are preserved and, with the support of traditional custodians, explained to the public (liaison and involvement with Aboriginal groups and individuals will be an important part of conservation, management, presentation and interpretation of cultural values).

4.2 Values

Nature conservation

World heritage values

Although Goold Island is only part of the Great Barrier Reef World Heritage Area, it meets most of the four criteria of outstanding universal value as set out in the World Heritage Convention, that is, the island is:

- an example of a major stage of the earth's evolutionary history;
- an outstanding example of geological processes, biological evolution and people's interaction with their natural environment;
- a place with unique, rare and superlative natural phenomena; and
- a place which provides habitats for rare and endangered species of plants and animals.

Island landscapes

The Brook Islands, Goold Island and the southern Family Islands are an integral part of the landscape of Rockingham Bay. The contrast of rainforest-covered islands and blue water makes them aesthetically attractive. Being small undisturbed tropical islands makes them a major attraction to tourists. The tall, densely forested cone of Goold Island in the centre of Rockingham Bay is an impressive feature when approached from any direction.

Beach stone-curlews and other birds

White-bellied sea-eagles and ospreys use the island as nesting sites. The beach stone-curlew, once a common bird, is now classed as vulnerable and might well be reduced to less than 1000 individuals Australia-wide. This bird is present on Goold Island and may breed there.

Vegetation

The predominant vegetation is open forest with areas of closed vine forest in sheltered areas. There are a few significant areas of mangroves. No threatened plants are known from Goold Island, although a thorough plant survey is required to establish whether any are present or not.

Cultural values

Early European explorers, including Cook, reported the presence of Aboriginal people on Goold Island. Aborigines probably used the island for the same reasons that make it popular today — its abundant marine resource and pleasant camping areas. Other evidence of Aboriginal occupation are the large stone fish trap on the northern end of Western Beach, a large campsite, and some shell scatters. The fish trap is one of the few lasting structures left by the former inhabitants in this area and indicates the lifestyle and the food sources used during Aboriginal occupation of the island. As well as the physical evidence of Aboriginal use, Goold Island, in common with many other areas, had cultural and spiritual significance to the Aboriginal people of the area, values which remain today for descendants of the original inhabitants.

Recreation and tourism

Because of its proximity to Cardwell, its relatively sheltered waters, attractive camping area and a reliable water supply, Goold Island has been a popular destination for recreational users since Cardwell was settled in 1865. Western Beach has been heavily used by private and commercial day visitors and campers for more than a century. This beach is particularly useful for commercial operators when

weather conditions preclude the use of other areas. A small beach on the eastern point (Wilderness Cove) is well situated for use by sea kayaking tours.

Western Beach is a fine recreational beach well suited to swimming, other beach activities and recreational fishing. The mountains of Hinchinbrook Island and the mainland combine to provide a splendid backdrop for these activities. The major drawback is that the extensive sand flat makes it inaccessible at low tides.

The sandspit area is popular for camping and has been heavily disturbed over many years, particularly near the tip of vegetation on the spit.

Some reef areas are suitable for snorkelling and diving, but visibility is often poor due to sediments stirred up by prevailing winds.

Along with the other islands of Rockingham Bay, Goold Island provides a range of opportunities for recreation. Close to the growing tourist centres of Mission Beach and Cardwell, and halfway between the ports of Cairns and Townsville, the islands' location makes them popular for day-trip operations and cruise vessels on longer trips.

Educational and scientific values

While Goold Island does not appear to have any special values for research, more information on the islands and reefs would be appreciated by management agencies. The plants and animals in particular are poorly known and require more research. The vulnerable beach stone-curlew warrants urgent research.

Goold Island's location and natural resources make it suitable for large school groups to study the diverse array of terrestrial and marine plant and animal communities.

4.3 Management strategies

4.3.1 Natural resource management

Background information

Goold Island has been a popular destination for recreational users for more than 100 years. Before that it was used by Aborigines, as indicated by fish traps, middens, and reports of early European explorers.

The current eucalypt-dominated forest probably reflects Aboriginal, then European, burning and shallow poor soils. To exclude fire would increase the closed forest and therefore reduce habitat diversity. A more immediate result would be the build-up of fuel which would create potential for a devastating wildfire.

Campfires and barbecue fires rely on firewood collection but the practice removes habitat for a number of small animals, inevitably scars some trees, and means others are cut down. Campfires on the beach and camping grounds are often left in an untidy condition and can also spark wildfires.

Feral pigs, goats, cats and cane toads have not been recorded in recent years, although considerable numbers of pigs were once on the island.

Early explorers make no mention of coconuts on Goold Island and it is extremely unlikely any were there before being introduced by Europeans. The size of existing trees suggests they are very recent arrivals on Goold Island. However, in many areas coconuts are now accepted and are a much-loved feature of the landscape. It is appropriate that some areas remain free of coconuts to preserve the original landscape, but on Goold Island coconuts are an accepted feature.

Some evidence of erosion exists on the sandspit area. Some of this is natural and some might have been caused by human use.

Desired outcomes

The composition, distribution and condition of the island's natural terrestrial ecosystems are maintained.

No new weeds or feral animals are introduced.

Guidelines and actions

- Survey the island for introduced animals and plants and, where feasible, remove any found.
- Permit coconut trees to remain and reproduce by natural means in the Western Beach area. However, prohibit planting anywhere and do not allow coconuts to establish on beaches where they have never been present as adult trees.
- Take steps to ensure no new animals or weeds are introduced. Take particular care when building or undertaking any other development to avoid introducing cane toads.
- Encourage and support a thorough plant and animal survey.
- Develop simple and rapid techniques for monitoring impacts on camping grounds and sandspit vegetation.
- Inspect the remainder of the island for any signs of developing ecological or overuse problems.
- Develop a plan to monitor the extent of any changes in vegetation patterns, possibly by the use of aerial photography or satellite imagery.
- Determine the cause of any significant changes identified by monitoring of the island. Address any changes attributable to human causes by altering permitted use levels, increasing patrols, or taking any other actions considered necessary.
- In any future planting or revegetation work — as far as possible — use only seeds or other propagating material from the island.
- Implement the fire plan. This requires a program of controlled burns to maintain the present mixture of habitat types, reduce the threat of wildfire, and keep options open for possible future manipulation of the island's ecosystems. The aim is to maintain a diversity of plant communities. Prohibit all other fires, except those for cultural activities carried out with the approval of the Service and the representative Aboriginal group.
- Where appropriate, erect fences to ensure that visitors are kept off areas where a potential for serious erosion exists.
- Develop co-ordinated management of airspace over the marine park and national park so aircraft are restricted to above 1500 feet. Methods of achieving this include amending the *Nature Conservation Regulation 1994* and ensuring that tourist program permits issued under the *Great Barrier Reef Marine Park Act 1975* exclude flights below 1500 feet.

4.3.2 Landscape management

Background information

Goold Island's landscape values are high as it is situated at the centre of Rockingham Bay. Any major development on the western beach would be obvious from Cardwell, as would any development on the higher parts of the island.

Desired outcome

The area's landscape values are maintained.

Guidelines and actions

- Do not approve any development on the peak of Goold Island if it would disrupt the island's skyline, or be visible from one kilometre to sea or from the mainland, unless it is demonstrably important for public safety and it is demonstrated that Goold Island is the best location.
- Do not approve development of any recreational facilities which would be visible from more than one kilometre to sea.

4.3.3 Native title

Background information

There are no formal native title claims over Goold Island National Park at the time of writing this plan, however native title may exist.

Desired outcome

Any native title rights which may exist over this national park are not adversely affected by this management plan.

Aboriginal people with a particular interest in the area are involved in decision making concerning matters in which they have an interest.

Guidelines and actions

- Consult with relevant Aboriginal people to establish principles and guidelines for cooperative management of native title, cultural heritage and other issues.
- Work programs and management activities will consider the requirements of native title legislation to ensure native title rights are not compromised.

4.3.4 Cultural heritage management

Background information

Goold Island was used by Aboriginal people. It would have been of cultural and spiritual significance to them and these values remain for their descendants. Cultural heritage sites such as fish traps and middens have been recorded on Goold Island. The fish traps are of undoubted value. More information is required on middens and other Aboriginal sites on the island.

Desired outcomes

Places of cultural heritage significance of Aboriginal and non-Aboriginal origin are protected from accidental or deliberate disturbance or destruction and are conserved for future generations, consistent with the wishes of traditional custodians and principles established in the Burra Charter.

Aboriginal interests are recognised and reflected in the management of issues which may affect cultural heritage matters on the park.

Guidelines and actions

- Ensure public use does not damage cultural sites, in particular the fish traps, and any other sites.
- Encourage research into cultural heritage to improve understanding of the nature and distribution of cultural sites and materials.
- Develop cultural resource management plans and programs for sensitive sites in consultation with

- those Aboriginal people particularly concerned with the area, and relevant users.
- Where possible, involve Aboriginal people in on-site interpretive activities.
 - Interpret cultural resources in accord with the latest information derived from research and Aboriginal wishes about the portrayal of their unique heritage.
 - Train staff in the recognition of cultural heritage places.
 - Survey the island to determine if any significant sites other than the fish traps exist and, if located, develop management guidelines.

4.3.5 Recreation, tourism and visitor use

Background information

Goold Island has a long history of heavy recreational use due to its location and the suitability of Western Beach for camping and beach-oriented activities. Although some impacts are evident, generally this use has been within the capacity of the island's habitats to withstand. These habitats appear robust and capable of absorbing many recreational users. However, the available space is finite and the tolerable level of impact is limited.

Potential increases in use could result in displacement of recreation settings and possible conflict between groups of users seeking different recreational experiences. As the tourism industry gains momentum, more applications for commercial use of Goold Island are likely. The strategy for managing Goold Island must be considered in the context of the region, as Goold provides opportunities not available on other islands. Therefore, while camping is not to be permitted on the Brook Islands and is to be limited in Family Islands National Park, opportunities will exist on Goold Island. Similarly, day use of the Brook Islands will be restricted, but areas will be available on Goold Island.

For some years before the release of the draft plan, a number of local operators held permits to visit Goold Island. At the time of preparation of this plan, current actual use by commercial tour operators is less than permitted use. If this latent capacity is taken up, it will allow use considerably above present levels. This plan considers the permitted level of use is appropriate for likely future demands and it will not be increased. However, existing facilities may not cope with this level of use and improvements may be required.

Because the island is situated between Hinchinbrook Island and the Family Group, Goold Island is an important site for commercial sea kayaking tours. Most of these groups prefer to camp at the eastern end of Goold Island (Wilderness Cove). Groups of more than 12 usually use Western Beach.

Desired outcomes

A range of appropriate nature-based recreational settings and opportunities is provided for independent and commercial visitors.

Impacts associated with visitor facilities are monitored and managed.

Guidelines and actions

- Develop a detailed site plan for Western Beach. As the area has valuable cultural sites (fish trap, old campsites and middens), develop the site plan in consultation with Aboriginal people. Allow for:
 - one large campground to be created, to hold an educational group of 70, or several smaller groups;
 - three to five smaller camping nodes (capable of holding one or two tents each) to be provided in places screened from the large campground;
 - camping sites to be marked so the cleared area is not expanded;
 - vegetation barriers to be replanted on the large area already cleared of undergrowth (this will give some privacy for camp sites, while allowing sufficient space for large groups); and

- toilet facilities to be assessed and upgraded when required.
- Replace existing pit toilets with composting toilets as resources permit.
- Do not provide camping or any other facilities north of a point about halfway along the beach.
- Permit large education groups of up to 70, a maximum of twice each year. (Such groups can be required to provide portable toilets and comply with any other conditions required by the district manager.)
- Issue no other camping permits when such groups are present.
- Limit smaller educational and other groups to 30.
- Allow a maximum of 50 campers at one time over all the camping sites when large educational groups are not present.
- Permit commercial day-visitor groups to use any part of the island and fringing reef — allow a maximum of 50 in a group to use Western and Southern Beaches and a maximum of 20 to use other sites.
- Limit commercial day visitors to 50 a day on each of Western and Southern Beaches.
- Allow one commercial day tour each week for other sites.
- Consider allowing an additional commercial operator from an Aboriginal group to conduct Aboriginal cultural tours at some time in the future — reserve permit capacity for this.
- Permit commercial sea kayaking tours to camp on the beach at Wilderness Cove (maximum of 12 people). Permit beach camping at Western or Southern Beaches when weather conditions are unsuitable or when group numbers exceed 12.
- Permit private sea kayakers to camp at Wilderness Cove, Southern Beach or Western Beach. Restrict group size to 6 at the first two locations and the same as for other groups at Western beach.
- When private day use exceeds 25 people for more than two days a week on a regular basis, consider restricting access to the area and implementing a daily limit to the number of people permitted ashore.
- Prohibit campfires, except for educational purposes. These must be part of an Aboriginal cultural tour run by persons approved by the relevant Aboriginal body or for other approved Aboriginal traditional purposes.
- Do not provide camping and day-visitor facilities on the extremity of the vegetated part of the spit as this is the most exposed and erosion-prone area.
- Explore the possibility of constructing walking tracks or trails, including routes to Southern Beach and to a high point with a view. Survey the island for other points of interest which could be made available to the public. Assess the impact of any proposed new tracks before deciding to build them.
- Regularly patrol major recreation areas and monitor erosion of beach access areas, illegal fires, litter, and damage to vegetation.
- Require visitors to remove all rubbish.
- Inform operators taking campers to Goold Island that: they must remove all rubbish; all campers must have camping permits; and all fires are banned. Also, make them aware of water availability.
- Permits for privately-run developments on Goold Island will not be granted, as Rockingham Bay area is well served with tourist resorts, caravan parks and so on.
- Because of the obvious material links of Goold Island with Aboriginal interests, refer any new applications for commercial use to representative Aboriginal groups for consideration.

4.3.6 Public utilities

Background information

Public utilities — such as transmission towers and navigation aids — are not present on Goold Island. Any proposals to construct these would be subject to the provisions of the *Nature Conservation Act 1992* (Section 35). These require that the cardinal principle for the management of national parks is followed to the greatest possible extent; the use must be in the public interest; the use must be ecologically sustainable; and there must be no reasonably practicable alternative. As the island is part of the Great Barrier Reef World Heritage Area, and listed on the Register of the National Estate, obligations associated with these listings must also be considered before any such development can be approved.

Desired outcomes

Goold Island's landscape is free of major or obvious intrusions.

Any public utilities which are constructed have minimal effect on the island's natural communities.

Guidelines and actions

- Subject all proposals for public utilities on Goold Island to environmental impact assessment.
- Grant approval only if it can be shown that:
 - the proposal meets the requirements of the relevant legislation (State and Commonwealth); and
 - it is important to public safety and Goold Island is the best location available.

4.3.7 Education and interpretation

Background information

The natural values and close proximity to the coast make Goold Island a popular site for local residents, school groups, and tourists. Its popularity makes it an important site for providing natural history information and management messages designed to minimise potential impacts.

Education and information need to be provided to schools and the public before they visit the island. Valuable opportunities exist for QPWS staff to present pre-visit and on-site talks to schools. Opportunities also exist for provision of pre-visit material at Cardwell and Mission Beach Information Centres and Hinchinbrook Island resort.

GBRMPA and QPWS have prepared a Great Barrier Reef Public Education Strategy to identify interpretive messages for the entire Great Barrier Reef. Requirements for public education are identified in this strategy.

Desired outcome

Information promoting responsible use of the area and helping the public understand and enjoy the natural values of the area is provided.

Visitors are aware of their obligations regarding the national park.

Guidelines and actions

- Provide most interpretation and education off-site, although allow some signs at Western Beach.
- Include the following aspects within the public education strategy:
 - pre-visit material in the form of a Brook, Family, and Goold Islands visitor information sheet;
 - information for local tourism centres including Mission Beach Information Centre, Dunk Island and Bedarra Island resorts, and Cardwell Information Centre;
 - a Cairns-Townsville island resource booklet for cruise operators;
 - provision of management information to Service, local, state and national publications;
 - information about the island's resources for commercial operators; and
 - information about potential impacts of their clients for tour operator training courses.
- Ensure tour operators continue to receive the Island Care code of conduct with permits.
- Ensure tour operators receive the reef and island user's guide developed by GBRMPA and QPWS, 'The Great Barrier Reef Marine Park (Reef) Manual', listing best environmental practices for all users of marine and national parks.
- Permit large groups (up to 70) for educational purposes. (See section 4.3.4 above.)

4.3.8 Research and monitoring

Background information

To be successful in the major objectives of conserving the habitats of Goold Island and permitting reasonable recreational use, an extensive body of information on biological processes is required. While research is clearly important in managing the island and reefs, areas involved are small and, in some cases, heavily used. Research itself might cause unacceptable impact. Baseline surveys of the area's natural and cultural resources and the users of these resources need to be undertaken, as highlighted elsewhere in this plan.

The need to monitor the impact of use levels and user satisfaction will continue. Techniques should be simple, and able to be carried out and processed by field staff.

Desired outcomes

Opportunities for low-impact research which contributes to baseline information on the resources of the park and park management are encouraged.

A monitoring plan which measures significant changes to island and reef ecosystems and identifies their causes is established.

Guidelines and actions

- Establish a program to monitor visitor effects on the island and adjacent reef. The program will involve simple and rapid techniques able to be carried out by field staff.
- Carry out social surveys to determine visitor expectations and satisfaction.
- Advise universities and other research institutions of research opportunities.

5 Bibliography

Campbell, J.B. (1982) Automatic seafood retrieval systems. Coastal archaeology in eastern Australia. in S. Bowdler (ed.) *Proceedings of the 1980 Valla conference on Australian Prehistory*, Australian National University Press, Canberra.

De Vantier, L. (1988) A preliminary report on the coral communities of the Brook Islands fringing reefs. Unpublished report to Q.NPWS.

De Vantier, L. (1991) The coral communities of the Brook Islands, with reference to damage by cyclones and vessel anchoring. Unpublished report for the Department of Environment and Heritage.

De Vantier, L. (1993) The coral communities of the Brook Islands 1987–1992. Unpublished report for the Department of Environment and Heritage.

Fell, D. (1988) Brook Islands Vegetation. Unpublished report to Q.NPWS.

Great Barrier Reef Marine Park Authority. (1987) Great Barrier Reef Marine Park Central Section Zoning Plan. GBRMPA, Townsville.

Jones, D. (1961) *The Cardwell Shire story*. Jacaranda Press, Brisbane.

Thorsborne, A.S., Thorsborne, M.G. and Winter, J.W. (1988) Population Changes of the Torresian Imperial Pigeon *Ducula spilorrhoa* over twenty-one years on North Brook Island, North Queensland. *The Emu* 88(1), pp.1-8.

Thorsborne, A.S. and Thorsborne, M.G. (1987) Seabird Islands. Brook Islands, Great Barrier Reef, Queensland. *Corella* 10(3), pp.84-86.

Thorsborne, A.S. and Thorsborne, M.G. (1988) *Hinchinbrook Island: the land that time forgot*. Weldons Pty. Ltd., Sydney.

Queensland National Parks and Wildlife Service. (1987) Townsville/Whitsunday Marine Park Zoning Plan. Q.NPWS, Brisbane.

Appendix A

Table 1 Summary of permitted use of Brook Islands and Goold Island National Parks

Locations	Private day visitors	Com. day visitors	Private campers	Sea kayak campers	Management considerations	Visitor numbers
North Brook Island	N	N	N	N	Outstanding natural values including seasonal bird nesting.	No use of island, other than approved research.
Middle Brook Island	N	N	N	N	Outstanding natural values including seasonal bird nesting.	No use of island, other than approved research.
Tween Brook Island	N	N	N	N	Outstanding natural values including seasonal bird nesting.	No use of island, other than approved research.
Goold Island Western Beach	Y	Y	Y	Y	Aboriginal fish trap and middens. Sheltered beach, access problems at low tide, large area for recreation activities.	Private campers max. number at one time — 50. Com. day tours max. group size — 50. Educational groups max. group size 70 twice a year max. Com. sea kayak tours max. group size 16.
Goold Island Southern Beach	Y	Y	N	Y	Exposed location, historically very little use, large area.	Com. sea kayak tours max. group size 16. Private sea kayak campers max. group size 6. Com. day tours max. group size — 50.
Goold Island East Beach (Wilderness Cove)	Y	Y	Y	Y	Small area very little flat land, suitable for small groups only, isolated wild atmosphere.	Com. sea kayak tours max. group size 12. Private sea kayak campers max. group size 6.