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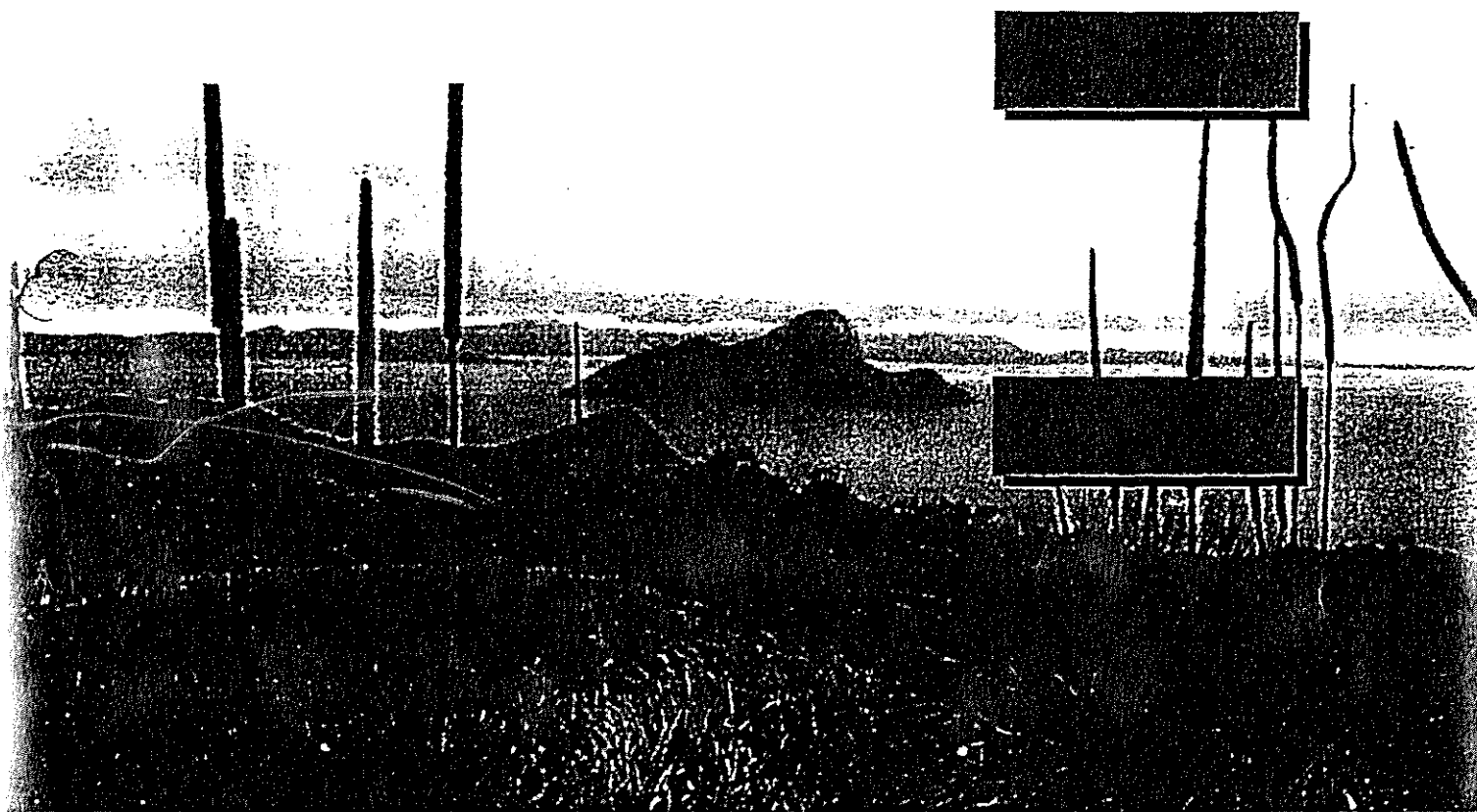
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Strategic Plan for the Management of the Whitsunday Marine and National Parks



Marine Parks



GREAT BARRIER REEF
MARINE PARK AUTHORITY



Department
of Environment

Foreword

The impressive landscape and seascape are special features of the Whitsundays. The panoramic scenery of relatively undeveloped islands and marine areas attracts growing numbers of visitors to the area each year. Many islands are National Parks and virtually all the marine areas are Marine Parks. These parks contain diverse and unusual plant, animal and marine communities and sites of geological, cultural and heritage significance, representing a small but highly significant part of the Great Barrier Reef World Heritage Area (GBRWhA).

The Great Barrier Reef Marine Park Authority (GBRMPA) and the Queensland Department of Environment (QDoE) are joint managers of the Great Barrier Reef World Heritage Area. The managers have worked together, in consultation with the public, to prepare the Strategic Plan for the Whitsunday Marine and National Parks (the Plan).

A community sense of 'ownership' and care is vital for the successful management of the Planning Area. There are many exciting opportunities in the parks for interpretation and study of natural, cultural and heritage features, and for community involvement in management related activities. The Whitsunday Coastal Advisory Committee (WCAC) has been instrumental in bringing resolution to many of the issues addressed in the Plan and will play a key role in the future management of the Whitsundays.

Recreational activities, both private and commercial, comprise the major use of the Whitsundays and the Plan incorporates a number of strategies for managing such activities.

Management places a strong emphasis on cooperation with island resorts and adjoining mainland municipal and private landowners to ensure protection of the natural values of the parks. The Plan will complement and assist with implementation of the proposed Coastal Protected Strategy of the Queensland Government and other environmental protection programs.

ABOUT THIS DOCUMENT

A Draft Management Plan for the Whitsunday National and Marine Parks was released for public comment in October 1993, resulting in response from a wide range of interest groups. This document is a revision of that draft, taking into account public comments and additional information.

This document identifies agreed actions and guidelines that will be applied to protect the natural, cultural and heritage values while allowing the public continued use and enjoyment of a wide range of recreational and other activities. This document recognises Aboriginal traditional affiliations to the Whitsundays and customary management rights. Representatives from the Giru Dala community have actively participated in the development of this document.

In order to provide regulatory basis for management consistent with the actions and guidelines in this document, management agencies are required to prepare statutory Plans of Management. The Great Barrier Reef Marine Park Authority (GBRMPA) has prepared a statutory Plan of Management, again with considerable public input, setting out the legal components of the plan for the Great Barrier Reef Marine Park (GBRMP). Similar plans are to be prepared by Queensland Department of Environment (QDoE) to cover regulatory tools for the State Marine Park and for the island National Parks. Each statutory plan will be implemented through different legislation (Commonwealth *Great Barrier Reef Marine Park Act* 1975, Queensland *Marine Park Act* 1982, Queensland *Nature Conservation Act* 1992).

This document outlines the management intent, actions and guidelines for the Planning Area including all Commonwealth and State Marine Parks and island National Parks, to ensure complementary management across all Parks.

GLOSSARY

The following abbreviations, acronyms and terms are used throughout this document.

ALS	Australian Littoral Society
AMSA	Australian Maritime Shipping Association
AMPTO	Association of Marine Park Tourist Operators
ANPWS	Australian National Parks and Wildlife Service
asl	above sea level
authorities	Permission issued by QFMA
Bareboats	self-'skippered' sailboats chartered from permitted marine agent.
BPA	Beach Protection Authority
BRD	Bycatch Reduction Device
CASA	Civil Aviation Safety Authority
CAP	Commercial activity permit (relevant only to National Park tenure)
Conservation Plan	Refers to the requirements of Part 7 of the <i>Nature Conservation Act</i>
DDM	Day-to-day management
DoT	Department of Transport (Commonwealth)
EIA	Environmental Impact Assessment
EMC	Environmental Management Charge
GBR	Great Barrier Reef
GBRMP	Great Barrier Reef Marine Park
GBRMFA	Great Barrier Reef Marine Park Authority
GBRWHA	Great Barrier Reef World Heritage Area
GIS	Geographic Information System
GUA	General Use A Zone
GUB	General Use B Zone
ha	hectares
HWM	High Water Mark
ICOMOS	International Council on Monuments and Sites
IMO	International Maritime Organisation
IUCN	The World Conservation Union
JCU	James Cook University of North Queensland
kts	knots
latent capacity	Generally described as the difference between permitted and actual use, and often represented as a percentage of permitted use.
Location	means: <ul style="list-style-type: none"> • a reefal area, or a named bay, inlet, cove or anchorage; or • a coastal area adjacent to a named beach; otherwise • a coastal area adjacent to a stretch of coastline (up to 3 kilometre in length).
LWM	Low Water Mark
m	metres
Marine Parks	Refers to both the Great Barrier Reef Marine Park and the Townsville/Whitsunday Marine Park.
MARPOL	International Convention for the Prevention of Pollution from Ships
MNPA	Marine National Park A Zone

MNPB	Marine National Park B Zone
MPA	Marine Park Authority (four person executive of the GBRMPA)
NAA	No Anchoring Areas
NAPAC	National Airspace Advisory Committee
NCL	Non Competitive Lease
NP	National Park
OUCH	Order of Underwater Coral Heroes
Plan	Refers to the Strategic Plan for Management of the Whitsunday Marine and National Parks.
Planning Area	Means the area to which the Plan applies (refer to Figure 1).
QCFO	Queensland Commercial Fishermens Organisation
QDEH	Queensland Department of Environment and Heritage, now QDoE
QDNR	Queensland Department of Natural Resources
QDoE	Queensland Department of Environment
QDoT	Queensland Department of Transport
QDPI	Queensland Department of Primary Industries
QFMA	Queensland Fish Management Authority
QNPWS	Queensland National Parks and Wildlife Service
QTTC	Queensland Travel and Tourism Corporation
RAPAC	Regional Airspace Users Advisory Committee
Resort style dives	Introductory dive: no previous experience or qualification required.
Settings	Refers to a recreational opportunity spectrum for the coastal and reefal areas of the Whitsundays, from 'Setting 1: Developed' to 'Setting 5: Restricted'.
Site Plans	A plan for a specified area of the Whitsundays, which may include statutory provisions for Marine and/or National Parks as appropriate.
Sites	Refers to areas defined in Site Plans.
SL	Special Lease
SMA	Special Management Area
TED	Turtle Exclusion Device
VCL	Vacant Crown Land
WCAC	Whitsunday Coastal Advisory Committee.
Whitsundays	Refers to the Cumberland Islands region, between Bowen and Mackay.
Zoning Plans	Refers to both the Central Section Zoning Plan and the Townsville/Whitsunday Zoning Plan.

LIST OF TABLES

1. Significant sites for seabirds and shorebirds, pied imperial pigeons and raptors.
2. Current and proposed education projects.

LIST OF FIGURES

1. Planning Area and Management Units
2. National Parks
3. Wildlife Habitats
4. Sensitive Sites
5. Settings for Tourism and Recreation
6. Aircraft Landing Areas
7. Camping Opportunities

TABLE OF CONTENTS

PART A: BASIS FOR MANAGEMENT	1
1. INTRODUCTION	1
1.1 Planning Area	1
1.2 Need for the Management Plan	1
1.3 Public Representations	2
1.4 Strategies Implemented during the Planning Process	4
1.5 Plan Amendments	5
2. MANAGEMENT OBLIGATIONS	6
3. VALUES	7
3.1 Natural Values	7
3.1.1 Landscape and Seascape	7
3.1.2 Marine Values	7
3.1.3 Island Flora and Fauna	7
3.2 Cultural and Heritage Values	8
3.3 Use Values	8
3.3.1 Tourism and Recreation	8
3.3.2 Research and Education	8
3.3.3 Fishing and Collecting	9
3.3.4 Shipping	9
4. STRATEGIC MANAGEMENT	10
4.1 Management Approach	10
4.2 Focus for Day to Day Management	10
4.3 Management Units	12
4.3.1 Hardy Unit	12
4.3.2 Gloucester Unit	12
4.3.3 Whitsunday Unit	12
4.3.4 Molle Unit	13
4.3.5 Lindeman Unit	13
4.3.6 Repulse Unit	13
PART B: MANAGEMENT ACTIONS AND GUIDELINES	14
5. LANDSCAPE AND SEASCAPE CONSERVATION	14
6. NATURE CONSERVATION	15
6.1 Marine Natural Resources	15
6.2 Reef Communities	16
6.3 Seagrass and Mangrove Communities	17
6.4 Marine Animals	18
6.4.1 Estuarine Crocodiles (<i>Crocodylus porosus</i>)	18
6.4.2 Marine Turtles	18
6.4.3 Dugong (<i>Dugong dugon</i>)	19
6.4.4 Whales	19
6.4.5 Crown-of-Thorns Starfish (<i>Ancathaster planci</i>)	20
6.5 Island Vegetation	21
6.6 Island Animals (native and feral)	23
6.6.1 Macropods	23
6.6.2 Seabirds and Shorebirds	24
6.6.3 Feral Animals	26
6.7 Geological Features	27
6.8 Maintaining Water Quality	28

6.8.1 Oil	29
6.8.2 Sewage, Liquid Waste and Garbage (vessel sourced)	30
6.8.3 Sewage (land sourced)	30
6.8.4 Garbage (land sourced)	31
6.8.5 Terrestrial Runoff	31
7. CULTURAL HERITAGE CONSERVATION	32
7.1 Aboriginal	32
7.2 Non-aboriginal	32
8. TOURISM AND RECREATION (non-extractive)	34
8.1 Settings for Tourism and Recreation (see Figure 5)	35
8.1.1 Setting Descriptions	36
8.1.2 Settings Matrix	38
8.2 Tourism & Recreation Opportunities - Marine	39
8.2.1 Hiring & Vending	39
8.2.2 Motorised Watersports	39
8.2.3 Parasailing	39
8.2.4 Diving & Snorkelling	40
8.2.5 Fish Feeding	40
8.2.6 Whale Watching	40
8.2.7 Reef Walking	41
8.2.8 Setting 5 Access	41
8.2.9 Bareboats	42
8.2.10 Aircraft	43
8.2.11 Large Vessels	44
8.3 Tourism & Recreation Opportunities - Island	46
8.3.1 Island Day Visits	46
8.3.2 Camping	46
8.3.3 Climbing and Abseiling	47
8.3.4 Special Events & Organised Groups	48
8.3.5 Walking	48
8.4 Management Facilities	49
8.4.1 Moorings and Markers	49
8.4.2 Island Infrastructure	49
8.5 Private Facilities	51
8.5.1 Island Resorts	51
8.5.2 Pontoons and Platforms	52
8.5.3 Moorings and Markers	52
8.6 Tourism Operations	54
8.6.1 Site Specific	55
8.6.2 Roving	55
8.6.3 Cruise Ships	56
8.6.4 Commercial Beach & Island Access	56
8.6.5 Commercial Camping	57
8.7 Site Restrictions	58
9. FISHING, COLLECTING & MARICULTURE	59
9.1 Commercial Fishing	59
9.2 Recreational Fishing, Charter Fishing and Spearfishing	60
9.3 Aquarium Fish Collecting	60
9.4 Shell Collecting	61
9.5 Coral Collecting	61
9.6 Sand and Rubble Collecting	61
9.7 Mariculture	62
9.8 Beche-de-mer and Trochus	62
9.9 Traditional Hunting and Collecting	62

10. SHIPPING	64
11. COASTAL DEVELOPMENT	65
12. INFORMATION, EDUCATION AND PARTICIPATION	67
12.1 Community Information and Education	67
12.2 Volunteer Program	69
12.3 Community Liaison	70
13. MANAGING AUTHORISED USES	71
13.1 Utilities and Services	71
13.2 Defence Forces	71
13.3 Plaques and Memorials	71
13.4 Search and Rescue	72
BIBLIOGRAPHY	73
APPENDIX 1: Legislative Obligations	76
APPENDIX 2: Reef Protection Program	79
APPENDIX 3: Conditions for Special Events.	80
APPENDIX 4: GBRMPA Sewage Discharge Guidelines	81
APPENDIX 5: Research, Assessment and Monitoring Projects	83

PART A: BASIS FOR MANAGEMENT

1. INTRODUCTION

The Great Barrier Reef Marine Park (GBRMP) was declared in 1975. In 1981 the Great Barrier Reef (GBR) including the islands became the first place in Australia to be inscribed on the World Heritage List. To be worthy of World Heritage status natural areas, such as the Great Barrier Reef World Heritage Area (GBRWHA), must meet strict criteria and only exceptional places are listed.

The outstanding natural beauty and high nature conservation values of the Whitsundays are widely recognised. The attractive combination of island and marine features has fostered its growth as one of the most popular and economically important tourist destinations in Queensland. In 1994/95 approximately 264,000 visitors spent about 1,327,000 nights in the Planning Area (Queensland Tourism and Travel 1996). Marketing aims to increase tourism by the year 2000 to 3,640,000 visitor nights (Whitsunday Tourism Association 1992) with a major increase expected in conjunction with the 2000 Olympics.

The marked increase in residential growth on the coastline of the Whitsundays is expected to continue with numbers rising from 94,273 residents in the Whitsunday, Mackay, and Bowen Local Government Areas in 1994 to a projected 117,629 by the year 2001 (Australian Bureau of Statistics, 1992, Queensland Department of Housing and Local Government, 1995).

Associated with the anticipated tourism and residential growth is an increase in commercial accommodation and private and commercial vessels operating in the Whitsundays. Other important industries in the region include commercial fishing and sugar farming. Inevitably, such activities directly and indirectly affect the Marine and National Parks of the Whitsundays.

1.1 Planning Area

The Planning Area incorporates the Marine and National Parks of the Whitsundays (see Figure 1). It comprises:

- approximately 208 square kilometres of island National Park, 4723 square kilometres of the Great Barrier Reef Marine Park (GBRMP); and
- an additional 200 square kilometres of the Townsville/Whitsunday State Marine Park.

1.2 Need for the Management Plan

Outstanding areas such as the Whitsunday Marine and National Parks require active management to ensure that natural features are protected while allowing visitors to continue to enjoy the area's natural attractions. Management is also required to minimise conflicts between incompatible or conflicting activities.

This plan has been prepared to provide a framework in which the following broad outcomes can be achieved:

- a secure future for the natural environment of the Whitsunday Marine and National Parks;
- a long term ecologically sustainable basis for activities occurring in the parks;
- preservation and protection of sites of cultural and heritage significance;
- a rationalisation of competing uses in the parks;
- a sustainable involvement of the parks within the regional community and economy through participation and effective management;
- a management system which addresses the expected increasing demand for park use and provides a clear process for management decisions;
- effective and efficient management of the parks; and

- an opportunity for the general community to be involved in, and consulted about, the planning and management of the Planning Area.

The Plan provides clear directions for conservation, recreation and resource use by providing specific management outcomes, actions and guidelines. A major purpose of the Plan is to prevent the degradation of natural, cultural and heritage values by the cumulative effects of small unplanned decisions.

1.3 Public Representations

The planning process commenced in 1991; a draft plan was released for public comment in October 1993. The public was heavily involved in the preparation phase of the original plan in 1991/92 with public meetings and distribution of a brochure covering the area from Mackay to Bowen inviting input from residents and commercial interests.. An additional phase was undertaken during the review of the draft document released in 1993. Finalisation of the Plan has been facilitated by the establishment of the Whitsunday Coastal Advisory Committee (WCAC).

291 public submissions were received during the initial phase of consultation. They revealed a diversity of opinion within the community about the issues and the methods by which they should be addressed. Among the issues raised were:

Visitor Numbers

Opinions on the impact of increasing visitor numbers upon park areas varied. Concerns were expressed that unrestricted visitor growth and access to park areas could damage natural values. Others believed that such problems would be minimal and that controls should only be introduced when there is proven damage to the environment. Suggested control methods included the use of restrictions from sensitive areas, education, limits on resort size and activities, limiting facilities and increasing enforcement and penalties for illegal activities.

Conservation

Many people expressed concerns about the protection of the area's native flora and fauna. Strategies included the establishment of Reef Appreciation Areas, wilderness areas, rezoning, and special protection of species such as pied imperial pigeons, turtles and dugong, particular habitats such as mangroves, and cultural and heritage sites.

Reef Damage

Respondents proposed a number of management solutions to prevent reef damage including increased education and enforcement, the installation of facilities such as moorings, zoning changes, the imposition of restrictions of various types and the seasonal closure of areas to allow recovery.

Pollution

Many people were concerned with litter, oil pollution, sewage discharge and agricultural runoff. Recommendations included requiring boats to be fitted with holding tanks, bans on large ships in the area, more strict waste management conditions on the island resorts and commercial operations, island litter management strategies, education and enforcement of legislation.

Fishing

All forms of fishing were discussed by respondents. Over-fishing was a major concern. Recommendations involved zoning changes, seasonal and/or rotational closure of heavily fished areas, education, bag limits, controls over charter and commercial operators, dive sites and trawling.

Education and Interpretation

Many respondents recommended that education and interpretation be emphasised, especially for non-English speaking visitors, for visitors using operations catering for large numbers, and for staff of commercial tourism operations. Recommendations ranged from pamphlets and ranger contact to training for tourist operator staff, and school holiday camps coordinated by park staff.

User Conflicts

Respondents reported conflicts between activities such as commercial and private recreational uses, shell collecting and reef appreciation, fishing and recreation, trawling and conservation, motorised watersports and passive recreation. Many people recommended that motorised watersports be restricted to resort areas and be removed from Gulnare Inlet (southern Whitsunday Island).

Facilities and Infrastructure

While tourism and its associated facilities were seen as essential to the local economy, most respondents suggested placing limits on the type and location of future developments. Most people recommended that future resort developments be restricted to the mainland and that non-tourism infrastructure (eg mariculture) should not be encouraged.

General Management

Recommendations concerning the general management of the parks included increased staff and resources, stricter controls, more enforcement and higher penalties.

Island Park Facilities

Requests for increased facilities on some island parks were common. Recommendations were for facilities such as camping grounds, picnic areas, toilets, walking track systems and interpretive signs. Many people requested that some islands be left undisturbed.

All representations were carefully considered in the preparation of the Draft Plan.

A total of 138 written submissions were received in response to the Draft Plan, mostly from local residents, commercial operators, associations and clubs. The main concerns raised related to access, equity, amenity, preservation, conservation and education issues. During subsequent meetings with the Whitsunday Coastal Advisory Committee, the Giru Dala Aboriginal community, and local interest groups the following issues were identified:

Anchor Damage and Moorings

The observed increased incidence of damage to corals in the Whitsundays, which is attributed to poor anchoring practices and crowding, is cause for general concern. The reef surveys and Reef Protection Program (see Appendix 2) implemented at sensitive sites during the planning process has commenced; additional management resources are required to maintain progress on this issue.

Access

The principle of providing a range of use opportunities through Management Areas is widely supported by both commercial operators and private users. It is seen as an important consideration for management of the Whitsundays. Some commercial operators opposed limits to vessel size and capacity proposed for the low use areas (MA 3 and MA 4) requesting consideration of proven performance. Conservation groups believe that a greater percentage of the area should be protected through restricted access. Settings for Tourism and Recreation have replaced the Management Areas and these have also received general community support during subsequent consultation.

Some limits to use recommended in the Draft Plan, such as a ceiling on 'bareboats', were strongly opposed after the Plan was released. However, during subsequent consultation, and with a greater awareness of the effect of cumulative impacts, there is growing support for a limit on vessel numbers operating within the Planning Area.

Displacement

With increasing visitation to the Whitsundays and the installation of facilities at popular destinations, crowding and displacement of other users has become an issue. The setting of limits to use and the installation of moorings to control access to sensitive sites is generally supported.

Equitable Management of Commercial and Private Recreational Use

Commercial operators, required to comply with permit conditions and payment of fees for use of Marine and National Parks, have emphasised the need for equity in management of all user groups. There is a perception that commercial operators are more restricted through permit requirements, and a belief that private recreational users should be subject to the same restrictions. Commercial operators maintain that it is in their interests to protect the resources on which their livelihood depends.

Latent Permit Capacity

In the latter stages of the second phase of public consultation, commercial and management interests have focussed on the significant difference between permitted use and actual use of the area. Referred to as 'latent capacity', the current level of commercial operations is considerably lower than that permitted (21% of currently permitted use), reflecting a high potential for expansion in the industry. Managers and tourist operators are concerned that, without limits to the issue of further permits, existing resources are inadequate to manage the potential use of the Whitsundays.

Coastal Development

Development in the Planning Area is presently concentrated around Airlie Beach, Shute Harbour and island resorts. Current proposals for additional, more remote, coastal resort and marina developments are likely to place additional demands on natural values and management resources, and may influence the proposed recreational settings. The concentration of future development at existing nodes is therefore strongly supported.

Cultural Heritage

Respondents generally supported the objectives of the Draft Plan, to protect sites of cultural significance and to consider the interests of Aboriginal people in the management of Aboriginal cultural resources. Consultation with the Giru Dala Aboriginal community since the release of the Draft Plan has identified additional sites of significance, in particular Hill Inlet, with recommendations for management strategies to protect these values.

Rare and Threatened Species

Support for protection of whales, dugongs, turtles and their habitats was reflected in public submissions and in public meetings. A recent report by Marsh *et al* (1995) has identified a serious decline in dugong numbers in the southern Great Barrier Reef Marine Park (including the Planning Area), raising widespread concern for the protection of this endangered species.

Island Park Facilities

There is general support for the Plan's objectives in respect of island infrastructure, with submissions recommending promotion of the 'user pays' principal to generate funds for installation and maintenance of facilities. Respondents also identify the need for increased management resources and additional facilities on island National Parks in the Planning Area.

1.4 Strategies Implemented during the Planning Process

Since the release of the Draft Plan, a number of major actions have been implemented including:

- installation of the first public moorings and reef protection markers;
- surveys of coral community structure on fringing reefs of the Planning Area;
- seabird surveys of the Whitsunday islands;

- establishment of the Whitsunday Coastal Advisory Committee;
- establishment of the Aboriginal Ranger Training and Employment Program;
- implementation of a moratorium on tourism program permits;
- agreement with industry and other stakeholders on appropriate strategies for aircraft and bareboat operations;
- collection of additional resource information;
- formation of the Whitsunday Volunteer Program; and
- close cooperation with community groups including Giru Dala community and OUCH (Order of Underwater Coral Heroes).

Further work will be required to complete some of the above actions and, in particular, some aspects of the Plan will need to be implemented through legislation such as regulations or statutory management plans.

The planning process has highlighted the limitations on management resources. This necessitated a precautionary approach to the use of areas until further work can be undertaken (eg placement of public moorings and toilet facilities, resource surveys in more remote locations and increased management presence).

1.5 Plan Amendments

Planning is a continuing process. It is likely that amendments to the plans will be required in the future due to:

- additional resource information;
- additional results of research and monitoring;
- additional management knowledge and experience;
- new uses or changing patterns of use;
- new strategic or policy directions or decisions; and
- the appearance of issues not covered in this document.

The review and evaluation of the success of the actions and guidelines will also provide an indication of the need for plan amendment and this will be undertaken as required.

2. MANAGEMENT OBLIGATIONS

The GBRWHA, including the Planning Area, is inscribed on the World Heritage List. Under the World Heritage Convention ratified by Australia in 1974, Commonwealth and State Governments are required to protect, conserve, preserve and present the areas listed. The principal legislative instruments by which the provisions of the Convention are met in the GBRWHA are the Commonwealth *Great Barrier Reef Marine Park Act 1975*, the Queensland *Marine Parks Act 1982* and the Queensland *Nature Conservation Act 1992*.

Under the Commonwealth *Great Barrier Reef Marine Park Act 1975*, the GBRMPA is obliged to provide for:

- conservation of the Great Barrier Reef;
- regulation of use of the Great Barrier Reef so as to protect the reef while allowing reasonable use;
- regulation of activities that exploit resources of the Great Barrier Reef so as to minimise the effect of those activities on the Great Barrier Reef;
- reservations of some areas of the Great Barrier Reef for its appreciation and enjoyment by the public; and
- preservation of some areas of the Great Barrier Reef in its natural state undisturbed by people except for the purposes of scientific research.

Similar obligations apply under the Queensland *Marine Parks Regulations 1990*.

Under the Queensland *Nature Conservation Act 1992*, park management agencies are obliged to:

- protect the environment (natural and heritage values, biological diversity and endangered or threatened species);
- provide opportunities for ecologically sustainable use;
 - give due consideration to existing users (including equity, amenity and safety);
 - rationalise competing uses (considerations include safety, amenity and allocation of limited resources); and
 - provide for a range of uses.

In addition to legislative obligations, a '25 Year Strategic Plan for the Great Barrier Reef World Heritage Area' has been prepared in consultation with, and adopted by governments; industry; commercial and private agencies in the Great Barrier Reef Region. It provides a vision statement for the future, that supports policies providing for:

- a healthy environment;
- sustainable multiple use;
- maintenance and enhancement of values;
- integrated management;
- knowledge-based but cautious decision making in the absence of information; and
- an informed, involved, committed community.

In making management decisions within the Planning Area, all decisions will have regard to these obligations.

3. VALUES

The Planning Area has high natural values (scenery, island and marine resources) and cultural values which provide a basis for the resource use values (tourism, resource harvesting, research, education) and the world heritage presentation values.

3.1 Natural Values

3.1.1 Landscape and Seascape

- The Planning Area has high scenic values. The largely undeveloped and protected island National Parks and combine island peaks, forested slopes, dunes and grasslands, beaches, fringing reefs and surrounding waters represent outstanding seascape, a key to the region's attraction to visitors.

3.1.2 Marine Values

- The Planning Area has a diverse coral reef system and range of associated biota. Most of the reefs, with the exception of the outermost Hardy Reef Unit, are well developed fringing reefs with distinctive shallow reef benthos. They show high percentage coral cover and high diversity of species. The highest level of reef development, and species diversity, is found in the north and central area of the Planning Area, with a unique species of massive coral recorded in Double Bay on the mainland coast.
- There are extensive shallow and deep-water seagrass beds throughout the Planning Area. Apart from their high inherent values as unique systems, seagrass meadows provide an important nursery habitat for fisheries and a food source for numerous species, particularly endangered dugong.
- Large populations of dugong appear to have existed in the Planning Area historically; only small populations are now known to live in several inshore localities.
- Four species of turtle, namely the green turtle (*Chelonia mydas*) [vulnerable], the flatback turtle (*Natator depressus*), the loggerhead turtle (*Caretta caretta*) [endangered], and the hawksbill turtle (*Eretmochelys imbricata*) [vulnerable] occur in the Planning Area in association with seagrass and algal beds around the island and mainland coast, in particular adjacent to Haslewood and Lupton Islands and Repulse Bay. Small numbers of flatback and green turtles nest on the beaches of some of these islands.
- Between May and September each year whales, mostly the humpback whale (*Megaptera novaeangliae*) visit the waters of the Whitsundays during their migration from the Southern Ocean in search of warmer winter waters for calving, before returning south for summer. Over recent years these visits have become increasingly popular with both commercial and recreational whale watchers.

3.1.3 Island Flora and Fauna

- The islands of the Planning Area have the highest floral species diversity recorded on any of the Great Barrier Reef continental islands, made up of 986 recorded native plant species including 20 rare and endangered species. The natural vegetation is made up largely of open grasslands, lowland vine forests and eucalyptus woodland; ecosystems which have almost disappeared from the mainland.
- The native vegetation provides habitat for native animals including a small population of the vulnerable Proserpine rock-wallaby (*Petrogale persephone*) on Gloucester Island, and the only island population of the unadorned rock-wallaby (*Petrogale inornata*) on Whitsunday Island.
- The beach stone-curlew (*Burhinus magnirostris*), vulnerable because of its sensitivity to human disturbance, occurs in low numbers on island beaches where it nests and forages.
- The islands within the Planning Area provide nesting habitat for the Orange-footed scrub fowl (*Megapodius reinwardt*) which has a limited distribution.
- The islands of Double Cone, North Repulse, Repair, Tancred and Little Armit represent some of the most southerly nesting sites for the migratory pied imperial pigeons (*Ducula*

spilorrhoea) during the months of October to March.

- Seabirds are an important part of the natural values of the Great Barrier Reef. Significant populations of terns, common noddies and pied cormorants have been recorded nesting and roosting on island beaches and rocks, particularly in the northern group of Eshelby, Double Cone, Little Armit and Grassy Islands.
- Significant invertebrate island fauna include a land snail (*Bentosites macleayi*) found only in vine thickets on Hook, Hayman and Border Islands, the uncommon native cockroach (*Macropanesthia rhinoceros*), and a butterfly (*Ogyris zosine zolivia*) recorded only on Hayman, Lindeman and Whitsunday Islands.

3.2 Cultural and Heritage Values

- Aborigines of the Gia and Ngaro clans inhabited the Planning Area for at least 10,000 years. In the late 19th century the Aboriginal population was estimated to be around 300 people. Today, the evidence of this early occupation includes a stone quarry of international significance and the Nara rock art site as well as many other sites.
- Other features of Aboriginal cultural significance include the high spiritual values placed on Hill Inlet by the Giru Dala Aboriginal Council of Elders as a place which should be protected from increasing levels of tourist use.
- Limited traditional hunting, fishing and collecting is undertaken in the Planning Area.
- Non-Aboriginal heritage values provide evidence of early island occupation by settlers and include shipwrecks, tramways, fencelines, building foundations and tools representing former grazing, agricultural and saw-milling activities.
- Dent Island Lighthouse is believed to be the original structure built before the late 1870s and is of significant heritage value as the oldest historical standing structure in the region. It also featured in an account by local Aboriginal people who survived a massacre on Dent Island by the Queensland Native Mounted Police in 1878. (*Bryce Barker pers. comm.*).

3.3 Use Values

3.3.1 Tourism and Recreation

- Tourism and recreation are the major uses of the Planning Area, accounting for 31% of recorded commercial visitation to the GBRMP in 1995/96. Visitors are attracted by the natural values of the area and by the available range of recreational opportunities, including boating, yachting and fishing, day tours to reef pontoons, scenic flights, sea kayak trips, watersports and island camping.
- The Planning Area offers some of the best cruising opportunities in Australia, with substantial use of localities as anchorages, for visitors to the area and those transiting through.
- Tourism use contributes substantially to the economy of the local area and provides for significant hospitality and service industries in mainland Airlie Beach, Shute Harbour and island resorts.
- The diversity of natural and cultural values of the Planning Area, and the ability (with appropriate management) to cope with large numbers of domestic and international visitors, provides an ideal opportunity for people to learn about, and appreciate, the values of the World Heritage Area.

3.3.2 Research and Education

- The relatively low level of natural and cultural resource information on the Whitsundays makes this a high priority area for research to assist in better understanding and management. Ongoing research projects include studies of the island vegetation, fringing reefs and cultural sites.
- The high natural, cultural and use values provide a wealth of educational opportunities which can be facilitated through tourist operations, school programs, volunteer activities and the Visitor Information Centre at Airlie Beach.

3.3.3 Fishing and Collecting

- Commercial fishing and collecting (principally coral and aquarium fish) occurs in the Planning Area on a small scale. The ability to sustain these activities in an intensively used area is a significant issue for this Plan.
- Recreational fishing remains a popular activity for visitors in privately owned vessels and on some commercial charters.

3.3.4 Shipping

- The Planning Area lies within the route used by vessels servicing ports to the north and south. Most vessels use the shipping route between Hook Island and Hook Reef, with some traffic using the Whitsunday Passage shipping route.

4. STRATEGIC MANAGEMENT

4.1 Management Approach

The Planning Area, approximately 1.5% of the total Marine Park area, currently attracts over 30% of the total tourist visitation to the Great Barrier Reef Marine Park. As such, the Planning Area represents one of the most intensively used areas of the GBRWHA. It is anticipated that the popularity of the Whitsundays as an attractive holiday destination will continue to increase significantly, with a major increase expected in conjunction with the 2000 Olympics.

Growth in visitation, and associated commercial accommodation and private and commercial vessel numbers, places additional pressures on the ability of management to cope with the impacts of use, including: anchor damage to fringing reefs, disturbance to vulnerable wildlife and island vegetation, and social impacts such as crowding and displacement. The Planning Area has significant natural, cultural and scenic values and it is essential that it is managed and presented at appropriate World Heritage Area standards.

In addition to a requirement that management resources are provided at adequate levels, it is also essential that patterns of use are directed to ensure optimal use of the Planning Area. For example, highest levels of use are currently focussed at Hardy Reef, the Molle Island group and the area adjacent to Whitsunday Island. If managed optimally, it is anticipated that these areas will be able to cope with the visitation demands for the foreseeable future. In contrast, the Repulse, Lindeman and outer Whitsunday Units have been protected by their remoteness and relatively small amount of development. If the use of these remote areas is permitted to increase significantly, then management resources will have to be diverted from the existing high use areas, leading to a lowering of management standards throughout the Planning Area, and inevitably to a degradation of the natural, cultural and use values.

4.2 Focus for Day to Day Management

Under an agreement between the Commonwealth and Queensland Governments the day to day management of the GBRWHA is carried out by agencies of the Queensland Government subject to policies of the GBRMPA.

QDoE is the principal agency involved in marine parks management, supported by a number of other agencies including:

- Queensland Boating and Fisheries Patrol;
- Queensland Police Service;
- Australian Customs Service (National Coastwatch aerial surveillance program); and
- Australian Marine Safety Authority (AMSA) on shipping related matters.

The Planning Area comprises part of the Department of Environment's Coastal Management District of Whitsundays, which extends from Upstart Bay in the north to the Sarina Shire's southern boundary and west to the outer boundary of the Great Barrier Reef Marine Park. The total area of the District is approximately 45,000 square kilometres includes around 200 islands and both State and Commonwealth Marine Parks. Approximately 4,723 square kilometres of this District is included in the Planning Area.

The focus of District management operations is at an administrative and information centre in Airlie Beach, that accommodates the staff responsible for undertaking day to day management activities in the Planning Area. Support facilities have also been developed on South Molle and Lindeman islands while a vessel base is currently being developed at the Able Point Marina (Airlie Beach).

Resource needs are assessed through a Three Year Rolling Program which is jointly developed and agreed by the Commonwealth and Queensland Governments, and forms the basis for development of more detailed annual programs, or business plans. Day to day management resources are currently being focussed to meet the following priorities:

Natural Resource Management

Priority is given to protection of sites of importance to threatened or vulnerable native species and biological communities, feral animal control, weed eradication and implementation of the prescribed burning program.

Cultural Resource Management

The Planning Area contains a number of sites of significance to the Aboriginal community and to the community generally. Cultural and historic site identification, protection and interpretation is guided by archaeologist support from the Northern Regional Office and external sources, and where it involves Aboriginal cultural sites, activities are undertaken in close consultation with the Giru Dala Council of Elders. The Aboriginal Ranger Training and Employment program, which was established in 1995, provides an important contribution to this work.

Law Enforcement and Surveillance

Vessel based law enforcement patrols aim to maintain and manage Park values through providing a visible management presence, informing and educating users and detecting infringement. Vessel patrols are coordinated with air surveillance activities as required. While enforcement and surveillance activities need to be responsive to a wide range of issues, a particular focus in recent years has been on illegal fishing. In the future, it is anticipated that enforcement of no-anchoring areas will also be a priority program.

Infrastructure Development and Maintenance

Historically priority was given to provision of facilities on the mainland and at heavily used island destinations, however, in recent years installation of fringing reef markers and public moorings has been an increasingly important priority. Development of a vessel operations base at Airlie Beach will also be undertaken over the next two years. Maintenance of existing bases and facilities is a major component of the capital works program.

Resource Assessment, Research and Monitoring

Resource assessment projects are undertaken to provide essential information on local geology, island flora and fauna, fringing reefs and cultural sites. Current monitoring priorities include surveys to delineate coral areas at sensitive sites, underwater video monitoring of fringing reefs, seabird/shorebird monitoring, assessment of turtle populations in Repulse Bay, monitoring the effects of controlled burns, crown-of-thorns starfish surveys and water quality sampling. In addition, research projects have focussed on compilation of resource inventories for management and planning.

Education and Interpretation

The Priority education and interpretation programs include provision of advice on management restrictions applying to use of the various locations within the planning area, for example, areas available for camping, areas closed to fishing, the Reef Protection Program (see Appendix 2). Education programs also address codes of behaviour, for example, appropriate anchoring practices, whale watching guidelines, fish feeding guidelines.

The displays and facilities at the Airlie Beach administration and information centre provide a focus for educational programs, management staff also coordinate and support community programs with schools and other interest groups.

Community involvement in management is also achieved through a variety of groups, including the WCAC, the Whitsunday Volunteer Association, the Giru Dala Council of Elders, and the Order of Underwater Coral Heroes (OUCH). Each of these community groups provide direct input into a variety of management processes.

4.3 Management Units

Within the Planning Area there are natural groupings of islands, reefs and adjacent waters which have common geographic, access and use characteristics as well as similar elements of nature conservation value. Because of these inherent characteristics, each group lends itself to, and requires, its own approach to management. These natural groupings have been defined as follows.

4.3.1 Hardy Unit

The Hardy Unit, which includes Hardy, Hook, Line, Sinkers and Bait Reefs, contains the only mid-shelf reefs in the Planning Area. The unit will be managed to provide for a range of nature-based opportunities, including intensive pontoon-based tourism, cruise ship anchorage, charter fishing and outer reef diving experiences.

With the Molle Unit and Inner Whitsunday Sub-Unit, the Hardy Unit will be the primary focus for tourism in the foreseeable future and will require intensive management to protect its highly valued features while still maintaining presentation opportunities.

4.3.2 Gloucester Unit

This Unit encompasses the Gloucester Islands National Park group of islands: Gloucester, Saddleback, Olden, Grassy, Middle, Low Islets, Rattray, Gumbrell, Armit, Double Cone, and Thomas Islands, the adjacent mainland coast, and the surrounding Marine Parks. Not all of this unit is within the Planning Area.

The Gloucester Unit contains some of the most highly valued natural features in the Planning Area, including diverse vegetation communities which have largely disappeared from the mainland. A small colony of the Proserpine rock-wallaby (*Petrogale persephone*) is found on Gloucester Island whilst several of the smaller islands, Eshelby in particular, support significant populations of birds. The northern reefs of the Whitsundays are amongst the most extensive and diverse fringing reefs of the Planning Area.

Existing levels of tourism and private recreational use are generally associated with the adjacent coastal settlements and a small resort. Use of identified sensitive localities, such as seabird nesting sites, will need to be restricted to protect their high conservation values. Despite developer interest in the mainland coastal strip, planning for significant growth in use cannot be undertaken with the very low levels of management resources available. Consequently, growth in use will not be encouraged in the foreseeable future.

4.3.3 Whitsunday Unit

The Whitsunday Unit includes the Whitsunday Islands National Park which encompasses Whitsunday, Hook, Arkhurst, Langford, Bird, Black, Border, Deloraine, Dumbell, Esk, Wirrainbeia, Ireby, Sillago, Yiundalla, Buddibuddi, Harold, Edward, Haslewood, Workington, Lupton, Nicholson, Teague, Nunga, Perseverance, Dungurra, Henning, Yerumbinna, Gungwiya, and Cid Islands.

Use patterns of the Whitsunday Unit emphasise the need to distinguish between inner and outer sub-units. This has important implications for management.

The Inner Whitsunday Sub-Unit comprises the mainland side of the island group which is readily accessible to recreational users and commercial tourist operations. It features sheltered bays, sand spits, deep fiord-like inlets, island beaches, popular camp sites and accessible fringing reefs. A number of localities are able to cater for intensive and high use by large numbers of people, particularly those centred on resorts at Hayman, Hook and Hamilton Islands. With the Molle and Hardy Units, this sub-unit will be the primary focus for Whitsunday tourism in the foreseeable future and will require intensive management to protect its highly valued features whilst maintaining presentation opportunities.

The Outer Whitsunday Sub-Unit also contains a wide range of features of both natural and cultural value, many of which are less readily accessible than sites in the inner sub-unit. With the exception of Whitehaven Beach (Whitsunday Island), where visitation is very high, existing levels of tourism and private recreational use are lower than the inner area. The area will be managed to protect the remoteness and highly valued features of identified sensitive sites such as Hill Inlet (Whitsunday Island) and Waite Bay (Haslewood Island). Growth in use will not be encouraged in the foreseeable future.

4.3.4 Molle Unit

The Molle Unit includes North Molle, South Molle, Mid Molle, Denman, Planton, Long, Pine, Repair, Shute, Tancred, Cow and Calf Islands, White Rock and surrounding Marine Parks. The Unit contains a range of features of both natural and cultural value, including diverse island vegetation communities, extensive native grassland, a pure stand of hoop pine, *Araucaria cunninghamii*, nesting colonies of pied imperial pigeons, and significant Aboriginal quarry and midden sites.

With the Inner Whitsunday Sub-Unit and Hardy Unit, this Unit will be the primary focus for tourism, associated with the resorts on Daydream and South Molle Islands, and for private recreational use from Shute Harbour and Airlie Beach. This Unit will also require intensive management.

4.3.5 Lindeman Unit

The Lindeman Unit includes Lindeman, Little Lindeman, Shaw, Pentecost, Cole, Ann, Sidney, Seaforth, Maher, Thomas, Mansell, Keyser, Volskow, Baynham, Comston, Gaaibirra, Triangle Islands and surrounding Marine Parks. A substantial area of Lindeman Island, based on freehold land, and leasehold over National Park, has been developed for the resort, golf course and air-strip.

The Lindeman Unit has significant scenic, natural and cultural values, including the protected waterways of Kennedy Sound, spectacular island views, numerous sheltered bays on Shaw Island, diverse vegetation communities, and an historic walking track system on Lindeman Island. Existing levels of tourism, primarily associated with the resort on Lindeman Island, extended or long range roving operations and private recreational use can be sustained with minimal management intervention. Very low levels of available management resources mean that growth in use will not be encouraged in the foreseeable future.

4.3.6 Repulse Unit

The Repulse Unit includes the National Park islands of North Repulse, South Repulse and East Repulse, the surrounding Marine Park, the State Marine Park waters of Repulse Bay, and the adjacent mainland coastline and tidal estuaries. Principal marine resource values include seagrass beds fringing the bay, which offer feeding habitat for turtles, and estuarine crocodile habitat in the estuaries.

Existing levels of tourism, primarily associated with the resort at Turtle Point, and private recreational use from the adjacent coastal settlements can be sustained with minimal management intervention. Despite developer interest in the mainland coastal strip, planning for significant growth in use cannot be undertaken with the current lack of survey information and the very low levels of management resources available. Growth in use in the Repulse Unit will not be encouraged in the foreseeable future.

PART B: MANAGEMENT ACTIONS AND GUIDELINES

5. LANDSCAPE AND SEASCAPE CONSERVATION

Desired Outcomes:

- To protect the scenic diversity of the landscape and seascape, particularly in areas of highest scenic quality and viewing interest.
- To minimise the visual impact of human use in all landscapes and seascapes.

See also: Section 8.5 Private facilities and Section 11 Coastal Development.

The Planning Area has very high scenic values. Its character comes from a combination of land and marine forms, climate, vegetation and land and sea use. It comprises islands and mainland coastal areas intersected by deep water channels, fringed by tropical shallow reefs, sand beaches abutting steep forested slopes, high dunes and grasslands. Five mid-shelf reefs are also within the Planning Area. Together these represent outstanding natural scenery which is a key to the region's attraction to visitors.

Apart from a core of residential, commercial and resort development centred on Airlie Beach, Shute Harbour and the island resorts, most alterations to the natural landscape and seascape are not evident to the casual observer. There are exceptions - the quarry on Hayman Island for example provides a significant visual impact on a natural landscape. The natural landscape and seascape qualities of the area may be adversely affected by inappropriate siting and design of facilities and structures, alteration to native vegetation, anchor damage and human activities.

Scenic values of the mainland coastline, islands and inshore reefs, have the potential to be compromised by inappropriate development and installation of facilities. A significant part of the Planning Area was included in the Whitsunday Landscape and Scenic Trial Study (Brouwer 1994) which identified and evaluated areas of high scenic quality and provided guidelines for minimising visual intrusion by developments.

Actions and Guidelines

- Manage developments and installation of facilities in accordance with the Settings (Section 8.1) and Site Plans (Supporting Documents).
- Consider the significance of view-sheds and vistas when undertaking and/or reviewing environmental impact assessments.
- Develop park facilities in accordance with the QDoE Site Planning Manual (QNPWS 1990) and ensure that landscape project guidelines are prepared and followed for all management activities that have the potential to be visually intrusive.
- Apply the results, guidelines and methodology in the Whitsunday Landscape and Scenic Trial Study to the management of potentially intrusive developments.
- Continue to provide comment on developments proposed by authorities, resorts and other landholders outside the Planning Area which may have an effect on the scenic values of the Planning Area.
- Liaise with adjacent landowners and authorities to achieve sympathetic siting and design of developments.

6. NATURE CONSERVATION

Desired Outcomes:

- To preserve and protect the diversity and habitats of the marine and island environments.
- To identify and ensure the highest protection for rare, threatened and significant species and communities.
- To maintain the present diversity of indigenous species and communities.
- To ensure that, in determining levels of acceptable change for features of conservation value, decision-making will be based on the precautionary principle and use the best available information gathered from expert sources.
- To prevent and minimise pollution and maintained water quality in the Planning Area.

6.1 Marine Natural Resources

Fringing reefs in the Whitsundays are most diverse and extensive adjacent to the northern mainland and islands. Together with the outer reefs support an abundance of reef life. The colourful corals, fish and other reef organisms are a major attraction for visitors to the Planning Area. There are also a number of rare and uncommon reef species found within the Planning Area.

Mangroves, soft-bottom and seagrass communities, and reefs throughout the Planning Area support internationally important species such as the flatback turtle (*Natator depressus*), green turtle (*Chelonia mydas*), loggerhead turtle (*Caretta caretta*) and the hawksbill turtle (*Eretmochelys imbricata*). Although numbers of turtles in the Planning Area are not high, they are still an important component of the natural diversity of the area. Dugong (*Dugong dugon*) are also found in seagrass habitat and these and mangroves are important nurseries for juvenile fish and prawns. (Figure 3 shows significant wildlife habitats.)

Threats to marine values include degradation from commercial and private recreational activities, runoff from coastal development and agriculture, over-fishing, collecting and pollution. Many of these threats are cumulative, difficult to quantify and to demonstrate accurately. Problem areas include Shute Harbour, the coastline north of Airlie Beach, especially Dingo Beach and Hideaway Bay, areas adjacent to island resorts and many of the fringing reefs popular for recreational activities.

Some waters within the Planning Area are presently not declared as Marine Park (eg Pioneer Bay and portions of Shute Harbour). Development in these areas requires careful management because of potential flow-on effects to other areas. Areas of seagrass, mangroves and fringing reef in the bays also need protection.

Actions and Guidelines

- Make formal recommendations to the Queensland Government for extension of the Marine Parks to include portions of Shute Harbour as GUB, and Pioneer Bay as GUA for the protection of fringing reefs and other marine ecosystems.
- Extend the Townsville/Whitsunday Marine Park to incorporate parts of Shute Harbour and Pioneer Bay. These areas should be zoned in accordance with the adjoining Marine Park zoning, ie GUB and GUA respectively.
- Continue involvement with strategic planning processes such as the Integrated Catchment Management process and Coastal Protection Strategy to minimise the effect of adjacent land uses on the Marine Parks.
- Continue liaison with local government to minimise the risk to reefs from off park nutrients and pollutants with emphasis on controlling discharges into Shute Harbour, Muddy Bay and Cannonvale.
- Continue research into the oceanographic processes including wave climate monitoring by in-situ wave-rider buoys.

6.2 Reef Communities

The differences in the distribution and extent of fringing reefs in the Planning Area are largely a result of local tides and freshwater run-off. The southern parts of the Planning Area, particularly between Long Island Sound and Cape Conway, have been subject to the effects of both the Proserpine and O'Connell Rivers for at least the last 6,000 years resulting in poor reef development in this area (van Woessik and De Vantier 1992).

In contrast, the northern waters and islands of the Whitsunday group are free from the influences of these river systems and as a result have developed more extensive and diverse reef structures. It appears that local water currents are responsible for frequently pushing the larvae of corals and other organisms from the mid-shelf onto the local fringing and mainland reefs. The relatively clear waters of the northern Whitsundays have allowed for the growth and development of corals relatively uncommon on fringing reefs.

The fringing reefs of both Hook and Hayman Islands are well developed. They are rich in species and contain a community of marine organisms normally found only on mid and outer shelf reefs.

Surveys of fringing reef locations in the Whitsundays conducted in 1995 identified Little Grassy Island and Nara Inlet reefs (Whitsunday Island) as outstanding in terms of species richness, coral cover, uniqueness and aesthetic appeal (De Vantier and Turak 1995). The shallow coral communities in the lee of Little Grassy Island have extremely high cover of overlapping *acroporids* colonies, with little sign of damage.

A previously undescribed coral species (*Goniastrea* sp.) has been recently recorded at Double Bay (van Woessik and De Vantier, 1992). A new species of sponge (*Rhabderemia sorokiniae*), from Deloraine Island reef, has also been described (Hooper 1990). The discovery of this species is only the second record for the genus in Australian waters.

Mainland coastal fringing reefs in the Dingo Beach/Hideaway Bay area and islands within Shute Harbour have moderate to high species richness (De Vantier *et al* 1996). They have the potential to be affected by runoff from adjacent residential subdivision.

Recent local interest in nudibranchs has also led to the discovery of a previously undescribed species and it is expected that other new species of marine flora and fauna will be identified in the Planning Area in the future.

During the mid to late 1980s a number of the northern reefs experienced outbreaks of the crown-of-thorns starfish. These reefs are currently in a recovery phase with small remnant populations of adult starfish observed on Bait Reef and in Blue Pearl Bay on Hayman Island. As increasing numbers of crown-of-thorns starfish were detected in northern reefs off Cairns and Townsville in early 1996, monitoring of the Whitsundays for new outbreaks will be ongoing.

Coral regrowth is particularly vulnerable to physical disturbance (eg fin damage, sediment and anchoring) and the aesthetic values and accessibility of these reefs make them vulnerable to degradation from excessive human use. This focus on accessibility of the reefs has led to anchoring damage at high use sites. Reef protection markers, delineating the seaward boundary of a 'no anchoring areas' (NAA) have now been installed at the following sensitive sites: Cateyan Bay (Border Island), Luncheon Bay, East Butterfly Bay, Maureen's Cove (Hook Island), Blue Pearl Bay (Hayman Island), Sunlover's Beach (Daydream Island) and Langford Island Spit.

The Dingo Beach area has been affected by shell and coral collecting through trampling, non-replacement of overturned rocks and possible over collecting (Barnett 1988). Areas on Arkhurst Island reef have been affected by a disease on two fast growing staghorn coral species (*Acropora cytherea* and *Acropora hyacinthus*) (van Woessik and De Vantier, 1992).

The mid and outer shelf reefs of the Whitsundays are characteristic to the central part of the GBR. Few areas of offshore remote reefs are visited daily by tourism operators, but areas of Hook, Hardy and Bait Reefs are the focus of local dive operations and experience the greatest visitation.

Actions and Guidelines

General

- Where required, investigate the need for increased protection of sensitive fringing reef sites (eg. Dingo Beach Reef) through development of Site Plans and future re-zoning of the Marine Park in consultation with the public.
- Investigate the need for additional management at intensively used sites (eg infrastructure, staff presence, etc).

Mooring and Anchoring

- Control anchoring on fringing reefs by:
 - installing and maintaining reef protection markers to delineate 'no anchoring areas' at sensitive fringing reef sites.
 - prohibiting anchoring in such a manner as to damage coral reef formations. Anchors shall be placed only on sand, rubble or mud off the reefs and be placed to avoid dragging into coral formations.
 - prohibiting anchoring inshore of, or within the area delineated by, reef protection markers.
 - requiring the use of public or dedicated use moorings (where installed) with the appropriate permissions, and in accordance with management directions regarding their use (Refer to Site Plans).

Education

- Undertake education programs to increase public and commercial awareness about correct anchoring and diving practices and to increase public understanding of the potential damage of their activities.

Research and Monitoring

- Support appropriate research, resource assessment, and monitoring programs on the reefs in the Planning Area (eg effects of anchoring on coral communities and state of fringing reefs) in high use areas.
- Monitor success of moorings and marker buoys.
- Assist in long term reef-wide monitoring (eg use of video transects as part of AIMS monitoring program).

6.3 Seagrass and Mangrove Communities

Seagrasses occur in many areas along the coast of northern Australia and are significant components of the flora of the GBR. Seagrass beds support a rich and diverse fauna and flora, providing sheltered, nutrient-rich habitat and grazing areas for dugongs and turtles. Seagrass, mangroves and estuaries are also important nurseries for a variety of marine life.

Mangrove forests are of major ecological and economic importance in the Whitsundays. They provide habitats and nurseries for fish, buffer estuaries from sediments and coastlines from storms, are natural nutrient filters, and are critical habitat for many birds and other wildlife.

Actions and Guidelines

Large areas of seagrass, located in GUB, have a higher level of protection. These areas are therefore unavailable for trawling. Some inshore areas of seagrass in GUA can be trawled. All mangroves are protected under Queensland legislation and require a permit for removal.

- Consider, in the next review of the Zoning Plans, any need to re-zone areas of seagrass the existing GUA.

- Encourage, and where possible undertake, research and monitoring of seagrass and mangrove communities.
- Support research into the effects of inshore trawling on seagrass communities.
- Promote the value of wetlands.
- Recommend Repulse Bay be considered for inclusion as a dugong protection area.

6.4 Marine Animals

There is a diversity and abundance of marine animal life in the Planning Area including some threatened and significant species. Plans for the conservation of endangered, threatened and vulnerable species are required to be prepared under the Queensland Nature Conservation Act and the Commonwealth Endangered Species Protection Act.

Actions and Guidelines

- Protect habitats for marine animal life in accordance with management strategies for reef communities, seagrass and mangrove communities.
- Encourage research into the distribution and behaviour of marine animals to determine management requirements.
- Continue to provide visitors with information on marine animals and design interpretive material to explain threats to marine life and appropriate visitor behaviour.

6.4.1 Estuarine Crocodiles (*Crocodylus porosus*)

Estuarine crocodiles are most often observed in tidal reaches of rivers but are also common in freshwater lagoons and swamps. Individuals are occasionally sighted on the reefs of the GBR.

Sightings of estuarine crocodiles within the Planning Area have been reported at Edgumbe Bay, Double Bay, Pioneer Bay, and Repulse Bay. Crocodiles may also occur in other areas in the Planning Area particularly in undisturbed areas of suitable habitat. QDoE has prepared a Crocodile Management Program for the east coast.

Actions and Guidelines

- Continue to implement the East Coast Crocodile Management Program.
- Require commercial crocodile watching to be conducted in accordance with QDoE guidelines.
- Investigate the occurrence and distribution of crocodiles on the islands within the Planning Area, in association with other resource assessment.
- Continue public education about appropriate behaviour in crocodile areas.

6.4.2 Marine Turtles

Four species of marine turtles occur in the Planning Area. The vulnerable¹ green turtle (*Chelonia mydas*) is found in association with the seagrass and algal beds around the islands and along the mainland coast. Seagrass beds provide significant browsing areas especially in Repulse Bay. The Haslewood/Lupton reef complex provides an extensive turtle feeding area. The green turtle is the most common turtle in the Planning Area but nests in low numbers.

Flatback turtles (*Natator depressus*) live in the deeper waters between islands and reefs and also nest in low numbers within the Planning Area. Middle Island in Edgumbe Bay is a flatback turtle nesting area.

Endangered¹ loggerhead turtles (*Caretta caretta*) migrate through the area on their way to and from nesting sites in the Capricorn-Bunker region, although individual loggerhead turtles may also live in the Planning Area.

¹ Commonwealth Endangered Species Protection Act

The vulnerable¹ hawksbill turtle (*Eretmochelys imbricata*) lives on the fringing reefs of some islands and at specific sites along the coast. Only small numbers have been sighted in the Planning Area.

Relatively few green and flatback turtles nest in the Planning Area in comparison with other areas in Queensland. Turtles are highly susceptible to human interference at nesting sites and may also be injured by boat propellers or caught in fishing trawls.

The Australian Northern Prawn Fishery is currently testing bycatch reduction devices (BRDs) which would service a similar function to turtle excluder devices (TEDs) used in the United States.

For thousands of years Aboriginal people have hunted turtles for subsistence and as part of their traditional culture. In the Planning Area there is now a low level of traditional Aboriginal hunting of green turtles.

Actions and Guidelines

- Identify significant turtle nesting and feeding areas.
- Where necessary to protect nesting sites, restrict access (eg Haslewood and Lupton Islands) or close beaches through site plans and seasonal closures.
- Restrict boating speeds in significant turtle areas as appropriate.
- Support the adoption of bycatch reduction devices by the trawl fisheries, to reduce turtle mortality in trawls.
- Continue negotiations with Aboriginal groups about sustainable hunting of green turtles.
- Continue public education and interpretation about turtle conservation and the effects of visitor behaviour.

6.4.3 Dugong (*Dugong dugon*)

Dugongs, one of only four living members of the mammalian order *Sirenia*, occurs in relatively low numbers in the Planning Area. For thousands of years Aboriginal people have hunted dugongs for subsistence and as part of the traditional culture. In recent times surveys indicate that dugong populations throughout the southern GBRMP are severely depleted and under pressure from a variety of activities such as habitat loss and gill netting, traditional hunting, incidental kills and illegal take.

The Giru Dala Community has expressed concern about the decline in dugong numbers and have indicated that they do not believe hunting should occur in the Planning Area until populations recover. A coordinated program to identify and implement strategies necessary to protect dugong through the GBRMP is underway. This program, which commenced in 1996 and will continue for two years, may identify other measures required to protect dugong in the Planning Area.

Actions and Guidelines

- As requested by the Giru Dala Community, permits will not be issued to hunt dugong in the Planning Area.
- Continue research on distribution and habits of dugong within the Planning Area.
- Continue public education and interpretation on dugong conservation.
- Further strategies to protect dugong will be developed through conservation programs.
- Recommend Repulse Bay be considered for inclusion as a dugong protection area.

6.4.4 Whales

Each year most of the large whales in the southern hemisphere follow a general migration pattern. Summer is spent in the cold waters of Antarctica where whales feed on krill. In autumn, temperatures fall and the whales begin a northward migration to more temperate, sub tropical, and (for some species) tropical waters to give birth and to mate before returning to Antarctic waters at the end of spring. The principal migratory species in the Planning Area is the endangered¹ humpback whale (*Megaptera novaengliae*).

Actions and Guidelines

Commercial tourist operations offer visitors the opportunity to observe these animals (Section 8.2.6). Management issues for the Planning Area currently include stranding and harassment by vessels. Plans for the conservation of the species are being prepared under the Queensland Nature Conservation Act and the Commonwealth Endangered Species Protection Act.

- Apply a 300 metre approach limit for all vessels undertaking whale-watching within the Planning Area
- Minimise disturbance to whales in accordance with relevant legislation and guidelines (Appendix 6) and through permits (refer to Section 8.2.6).
- Undertake research and monitoring to determine distribution and habits of humpback whales and the effectiveness of management in the Planning Area.
- Maintain a seasonal awareness program in conjunction with whale watching in the Planning Area.

6.4.5 Crown-of-Thorns Starfish (*Ancathaster planci*)

Over the last few decades it has been found that crown-of-thorns aggregations have caused large scale coral destruction in some parts of the Great Barrier Reef. While research continues into the reasons for this, no clear strategy has emerged that will allow managers to address the issue on a large-scale basis.

Local-scale control programs around tourist pontoons have proven successful in the past. These programs are labour intensive and rely on the injection of chemicals into crown of thorns. They are clearly an option for management of sites where crown-of-thorn infestations threaten local environments around tourist operations and where the viability of those operations would be significantly affected by any local outbreaks.

Any decision to allow local control programs for crown-of-thorns to be undertaken needs to consider the potential impact of such a program on both the tourist operation and on the local biodiversity of the site and reef in question.

Action and Guidelines

- Permit crown-of-thorns starfish controls in accordance with GBRMPA policy as required.
- Assist in monitoring of coral regeneration after crown-of-thorns outbreaks.
- Maintain COTSWATCH program.

6.5 Island Vegetation

The vegetation of the islands within the Planning Area is an essential component of the landscape and represents a diverse and important range of ecosystems. It also provides habitat for native animals, prevents erosion and protects water catchments.

A recent study of the flora of the continental islands (Batianoff and Dillewaard 1997) identified the Whitsundays as having a higher species diversity compared with the northern and southern regions of the GBRWHA. It includes 986 native species, 255 exclusive regional species, 20 rare and endangered species and 155 exotic species. The species richness is considered to be due to its unique geology (Whitsunday volcanic) and high number of larger islands. Though the total cover of rainforest is small, this habitat contributes most to the biodiversity. In the Whitsunday to Mackay area there are about equal numbers of rainforest and open forest species. To the north a high percentage of species belong to rainforest flora whilst to the south the flora is dominated by open forest species.

The tall native tropical grasslands, lowland vine forests and *Eucalyptus platyphylla* woodland of the islands represent ecosystems which have largely disappeared from the adjacent mainland. There have been vast changes to non-rainforest islands of the Planning Area since non-Aboriginal settlement. This has resulted in an overall loss of habitat diversity particularly in the ground layer and has been associated with a massive weed invasion. Variation in the Aboriginal fire regimes has also altered the vegetation. Evidence of this is provided by historical records, old photographs, aerial photography and an analysis of the structure and diversity of the vegetation.

Other threats to native vegetation in the Planning Area include weeds, introduced animals and human activities. The beach line vegetation and spinifex on high-use beaches such as Whitehaven Beach on Whitsunday Island are particularly vulnerable to disturbance.

The grasslands on islands such as Haslewood, Lindeman, the Molle and Repulse groups, Dent and Shaw are good examples of a range of mid-height to tall tropical grasslands that are relatively free of weeds. Removal of feral animals and maintenance of a fire regime may assist in preserving the native tropical grasslands along coastal Queensland.

Patches of lowland vine forest on the northern islands such as Armit, Langford and Double Cone, and *Eucalyptus platyphylla* woodland on the south west of Lindeman Island also have high conservation values. Both forest communities are becoming rare on the adjacent mainland due to extensive clearing for agriculture and urban development.

The Whitehaven Beach *Acacia* community, which has a large number of trees approaching senility, was affected by an extensive wildfire in 1995 after a period of over 35 years without fire. This community requires fire to regenerate and prevent replacement by other vegetation communities.

Other unusual distributions or occurrences of locally rare species include: the extensive stand of *Pisonia grandis* trees on Eshelby Island; the orchid *Dendrobium discolor* which occurs in unusual forms on some islands; *Acacia polyadenia* on Shaw and Thomas Islands; and *Brachychiton compactus* on Armit, Langford, Hayman, Whitsunday and several other islands.

The dunes of Whitsunday and Haslewood Islands are significant as there is no comparable dune ecosystem between Cooktown and Rockhampton, and there are distinct latitudinal differences in species composition. These high dunes support unusual species including the wedding bush (*Ricinocarpus pinifolius*), which is not found north of Byfield on the mainland.

Weeds are a problem particularly in areas where domestic animals have been introduced, and pose a serious threat to native plant communities. Common weed species in the Planning Area include lantana (*Lantana camara*), sisal hemp (*Agave sisalana*), moses in the

cradle (*Rhoeo spp.*), prickly pear (*Opuntia spp.*), cobblers peg (*Bidens pilosa*) and coconut palms (*Cocos nucifera*). *Rhoeo spp.* is an aggressive adaptable weed and has infested some islands. It grows well in rainforest and in exposed rock crevices. Coconut palms alter the natural scenic landscape of National Parks and have the capacity to infest other islands. They may also be a safety hazard to visitors with possible public liability consequences. Lantana is the most significant weed in the Planning Area and covers large areas on some islands. It occurs mostly in moist conditions and forms a dense barrier with a closed canopy allowing almost no light to penetrate. Sisal hemp, although localised to a major infestation running north along the beach from Burning Point to Neck Bay on Shaw Island, has the potential to spread rapidly and could pose problems if it becomes more established.

The only way in which habitat diversity can be achieved and maintained is to re-introduce regular burning patterns for ecosystems which depend on fire for their long term survival. If fire is excluded, the extent of grassland and open woodland communities will decrease and species diversity will decline.

Some habitat change has progressed because of lack of fire to the point where the ground cover has largely disappeared and/or exotic weeds have established. Management of these areas requires further investigation to determine how ground cover may be re-established. Fire management will be a high priority for island natural resource management.

In addition to the recent work on the vegetation of offshore continental islands a survey by the Queensland Herbarium is currently underway to define vegetation communities, to produce a vegetation map and delineate key conservation areas including some inshore islands between Gloucester Island to Hay Point.

Actions and Guidelines

General

- Continue to support the Queensland Herbarium vegetation survey of the Planning Area and recommend conservation requirements.
- Minimise disturbance of native vegetation except where the long term survival of the species or community requires site manipulation.
- Use only indigenous species for revegetation/landscaping works in National Parks.
- Conduct systematic vegetation monitoring, and essential research programs.
- Continue with development of plant species lists for the Planning Area and recording of incidental observations.
- Restrict use levels and activities where conservation values are threatened by humans.
- Increase public awareness about rare and threatened species and their specific management requirements.

Prescribed Burning

- Maintain and monitor a program of prescribed burning in areas where the need is identified, to maintain present diversity or restore prescribed conditions. Initial emphasis to be on native grasslands.
- Prepare and have approved, prescribed, controlled fire regimes prior to burning.
- Monitor the effects of burning using photography and undertake vegetation surveys to determine future requirements, in particular fire requirements for grassland and sclerophyll communities.
- Update and maintain interpretive material and public awareness programs about prescribed burning plans in the National Parks.

Weed Control

- Review and implement a weed management plan to identify areas of infestation, methods of control, and revegetation needs and priorities.
- Increase awareness of resort staff and visitors about the adverse effects of introduced plants on natural values.
- Enforce lease conditions relating to the control of weeds.
- Determine effective control or eradication of weed species.

6.6 Island Animals (native and feral)

Animal and plant species on islands have developed in an environment where competitors and predators are fewer than on the mainland. This, together with the relatively small populations and habitat areas, means that they are particularly vulnerable to disturbance from introduced species and human activities.

The Queensland Nature Conservation Act and the Commonwealth Endangered Species Protection Act require that plans be prepared for the conservation of endangered, threatened and vulnerable species.

The conservation of indigenous animals depends on maintaining habitats with an area sufficiently large and diverse to support viable populations. Threats to habitat and wildlife include weeds, feral animals, disease, lack of appropriate fire regime, and human activity. Beach line habitats are normally the areas of greatest human use and are the most threatened by human impact and weed infestation. Feeding of wildlife by visitors is unnatural, encourages dependence on artificial food sources and can threaten individual and species survival.

Some native animals have been introduced into the island ecosystems. These include agile and whiptail wallabies and grey kangaroos on Long Island, and wallaroos and agile wallaroos on Daydream Island and Hamilton Island. They can threaten the indigenous species by competing for food, modifying habitats and/or introducing disease. If the species are already present, introduced animals of the same species can alter the gene pool.

There is limited information on native animals in the Planning Area; particularly reptiles, forest birds and invertebrates. The islands support a number of significant animals which require special management consideration. These include the Proserpine and unadorned rock-wallabies, pied imperial pigeon, raptors, orange-footed scrub fowl, estuarine crocodile, a sub-species of the skink (*Carlia pectoralis*), a land snail (*Bentosites macleanyi*), found only in vine thickets on Hook, Hayman and Border Islands, the uncommon native cockroach, (*Macropanesthia rhinoceros*) and a butterfly (*Ogyris zosine zolivia*) recorded only on Hayman, Lindeman and Whitsunday Islands in *Eucalyptus platyphylla* forest.

The beaches of the Planning Area also represent important breeding habitats for seabirds and shorebirds, the beach stone-curlew in particular, and for sea turtles.

Actions and Guidelines

- Protect natural habitats for native animals in accordance Section 6.5.
- Restrict the transfer of native animals between islands or from the mainland.
- Develop interpretive material to explain the conservation needs of rare and threatened species and threats caused by the introduction of native animals and by human disturbance.
- Have input into conservation planning activities undertaken under the Queensland Nature Conservation Act for special species.
- Support continued research and systematic monitoring of endangered, threatened and vulnerable native animals.
- Maintain accurate records of incidental fauna observations by QDoE staff and volunteers.

6.6.1 Macropods

Proserpine rock-wallaby (Petrogale persephone)

The Proserpine rock-wallaby is vulnerable to extinction (Commonwealth Endangered Species Act) and is restricted to Gloucester Island and a few areas on the adjacent mainland. The species is susceptible to disturbance from human activities. Research into the species and its conservation requirements is currently being undertaken by QDoE.

Unadorned rock-wallaby (Petrogale inornata)

Whitsunday Island contains the only island population of the unadorned rock-wallaby, a population which may have been isolated from the mainland for 10,000 years. It has been recorded at Sawmill, Dugong, Joes, Whitehaven and a number of other beaches.

Actions and Guidelines

- Maintain involvement in research into the distribution, ecology, behaviour, population and habitat requirements, and the genetic importance of the isolated populations of Proserpine rock-wallaby and the unadorned rock-wallaby, including island populations (eg Gloucester and Whitsunday Islands).
- Prepare a Conservation Plan for the Proserpine rock-wallaby (under Parts 5 and 7 of the Queensland Nature Conservation Act).

6.6.2 Seabirds and Shorebirds

The Planning Area includes significant seabird breeding and shorebird feeding sites. Many areas are stopovers in the migration route and are subject to international agreements such as JAMBA and CAMBA. Seabirds nesting in colonies and roosting on sandspits, and shorebirds feeding at mudflats, are susceptible to disturbance from human activity. A program of scheduled monitoring of nesting and roosting seabirds and shorebirds of the Whitsunday Islands was commenced by QDoE in 1995 and will continue with additional support of the Whitsunday Volunteers funded by a Coastcare grant.

Seasonal closures at significant seabird/shorebird sites have previously been implemented through the Marine Parks permit system. They aim to minimise the disturbance to breeding, nesting and feeding birds caused by human activities (eg vessels, aircraft and beach activities), during critical periods. The seasonal closures have been based on records and observations at each of the locations listed and consider the access point and topography of each site to assess the potential for disturbance. In addition, the species diversity, conservation status of birds and the number of each species combine to determine the level of significance of each location.

Actions and Guidelines

- Minimise the impact of aircraft and vessels at significant seabird/shorebird sites listed in Table 1 (for the period specified), in consultation with local industry, the Civil Aviation Authority and other relevant authorities.
- Restrict shore access at significant seabird/shorebird sites identified for the time-periods specified in Table 1.
- Review and update the list of significant seabird/shorebird sites (Table 1) based on future records from the seabird monitoring project and incidental fauna observations. Priority sites include Saba Bay, Mackerel Bay, Osprey Bay and Windy Bay.
- Continue to conduct systematic monitoring of seabird and shorebird feeding and roosting concentrations, including those at Eshelby Island, and if necessary restrict inappropriate activities.

Beach stone-curlew (Burhinus magnirostris)

Because of the low number of nesting pairs, the beach stone-curlew is considered vulnerable to extinction in Australia (Garnett 1992). These birds nest and/or forage on beaches such as the north west side of Shaw Island, the southern and eastern beaches of Whitsunday Island, Grassy Island, at Pig Bay on Haslewood Island, Black Island and beaches at Double Cone Island. Nesting occurs between October and March. It is likely that the beach stone-curlew visits other suitable beaches in the Whitsunday area. The species is sensitive to human disturbance and development (Garnett 1992).

Actions and Guidelines

Prepare a Conservation Plan for the beach stone-curlew.
Develop interpretive strategies about the conservation significance and threats to the beach stone-curlew, and the reason for seasonal closures.

Orange-footed scrub fowl (*Megapodius reinwardt*).

The orange-footed scrub fowl builds its nest mounds on forest flats behind beaches. This species has a limited distribution but occurs on most islands within the Planning Area. Nesting activities and mounds may be disrupted by human activities.

Actions and Guidelines

- Minimise the impacts of disturbance to nest mounds through site development planning and placement of infrastructure where necessary.

Pied imperial pigeons (*Ducula spilorrhoa*)

This species nests in colonies on Double Cone, North Repulse, Repair, Tancred, Low, Little Armit and Armit Islands and White Rock. The local populations represent some of the few breeding localities in the Central Section of the GBRWHA. Nesting occurs between October and March and the species is vulnerable to disturbance by human activities.

Actions and Guidelines

- Seasonally close access to pied imperial pigeon nesting sites listed in Table 1, to protect nesting sites, except for scientific or management purposes.
- Develop interpretive strategies to explain the conservation significance and threats to pied imperial pigeons, and the reasons for seasonal closures.

Raptors

Raptors in the Planning Area include: the osprey (*Pandion haliaetus*); the white-breasted sea eagle (*Haliaeetus leucogaster*); the Brahminy kite (*Haliastur indus*); the wedge-tailed eagle (*Aquila audax*) and the peregrine falcon (*Falco peregrinus*). The nesting season of raptors extends from April to November and coincides with peak visitor numbers to the Whitsundays. Nests are often located on or near rock cliffs and outcrops and nesting pairs may be vulnerable to disturbance by human activities. Although some pairs may become adapted to human presence, others desert their nests.

Actions and Guidelines

- Continue to monitor and map nesting sites and determine conservation needs.
- Where necessary restrict noisy and intrusive activities in the vicinity of raptor nesting sites between April and November (eg through Site Plans).
- Locate picnic facilities and campsites to minimise disturbance to nesting, roosting and feeding sites.
- Develop interpretive strategies to explain the conservation significance and threats to raptors, especially the sensitivity of nesting sites.
- Amend seasonal closures as required.

*Table 1: Significant sites for seabirds, shorebirds, pied imperial pigeons and raptors.
(Source - QDoE Seabird database/inventory)*

LOCALITY	PERIOD OF SENSITIVITY	SIGNIFICANCE
Armit Island	1 October - 31 March	Beach stone-curlew; pied imperial pigeon.
Little Armit Island	1 October - 31 March	Major pied imperial pigeon; Beach stone-curlew; nesting osprey.
Bird Island	All year	Beach stone-curlew; 3 nesting osprey.
Double Cone Island	All year	Major pied imperial pigeon; nesting beach stone-curlew; osprey; nesting white breasted sea-eagle; breeding silver gull, orange footed scrub fowl.
East Rock	1 October - 31 March	Nesting crested tern; black-naped tern; pied cormorant.
Edwin Rock	1 October - 31 March	Nesting crested and black-naped tern; pied cormorant.
Eshelby Island	All year (Preservation Zone)	Major seabird rookery (bridled, crested, lesser-crested tern); nesting white-breasted sea-eagle.
Little Eshelby Island	All year (Preservation Zone)	Lesser crested, crested and bridled tern nesting; nesting osprey.
Esk Island	1 April - 30 September	Nesting osprey and white-breasted sea eagle.
Grassy Island	1 October - 31 March	Nesting beach stone-curlew; white-breasted sea eagle.
Little Grassy Island	1 October - 31 March	Beach stone-curlew; crested and black-naped terns; nesting osprey.
Low Island	1 October - 31 March	Nesting black-naped tern; pied imperial pigeon.
North & East Repulse Islands	1 October - 31 March	Nesting pied imperial pigeon.
Olden Island	1 October - 31 March	Nesting black-naped tern; pied cormorant.
Petrel Islets	1 October - 31 March	Nesting crested tern.
Pig Bay Haslewood Island	1 October - 31 March	Nesting beach stone-curlew.
Repair Island	1 October - 31 March	Pied imperial pigeon.
Tancred Island	1 October - 31 March	Pied imperial pigeon; osprey.
White Rock	1 October - 31 March	Nesting crested tern and lesser-crested tern; reef heron.

6.6.3 Feral Animals

Several islands within the Planning Area were originally used to graze sheep and cattle. Goats were also introduced on some islands to provide food for shipwrecked people in the late 1800s.

Feral animals, such as pigs, cats, goats, rats and cane toads, which are widespread on the mainland only occur on some islands in the Planning Area. Cane toads occur on some resort islands and on Thomas (Lindeman Group), Shaw and Gloucester Islands. Goats are found on North Molle, Hayman, Long and Hook Islands. A small population of pigs exist on Haslewood Island. Other species such as rats, cats, dogs, sparrows and deer are at present restricted in the Whitsundays although some have the potential to spread.

Feral animals can cause erosion, spread weeds and threaten indigenous wildlife by adversely affecting native habitat, predation and competition for food. It is therefore important that islands are kept free of feral animals.

Currently introduced animals are controlled by shooting, poisoning, trapping and by educating people to assist in preventing further introductions.

Actions and Guidelines

- Finalise and implement an operational plan for the control of introduced animals which identifies priority species, areas and methods of control.
- Encourage research into the effects of feral animals on the natural environment.
- Encourage research into biological control of introduced animals.
- Monitor the populations and distribution of feral animals.
- Assist in preventing further infestations through education, interpretation and cooperation with the public and resort operators.
- Reinforce the dangers of pets to native wildlife through education, interpretation and cooperation with the public and resort operators.
- Oppose the establishment of zoos on islands of any tenure and plan for the removal of non-indigenous species from existing zoos.

6.7 Geological Features

The Whitsunday islands are remnants of past volcanic activity and typically the coastline comprises steep rocky shores, with occasional small sandy beaches. Of particular note is Pentecost Island which provides a remarkable vista of an extinct volcanic cone rising above the sea. This was the only feature in the Whitsundays named by Captain James Cook in 1770 (Colfelt 1995).

The brilliant white silica sand beaches of Whitsunday and Haslewood Islands are also of geomorphological importance. Principal among these is Whitehaven Beach which is 'unique among these islands and indeed beaches in general' (Valentine 1985).

The spectacular beaches of naturally Whitehaven Bay represent unique deposits of fine, white, quartzose sand which were imported into the system during the late Pleistocene and have been subsequently modified by tidal currents. These deposits are irreplaceable.

It is important that unique geological features are protected from damage by human activities, such as vandalism, recreational use and resource utilisation. Beaches are a scarce resource within the Planning Area (Valentine 1985) and subject to increasing pressure from human activity and development.

The Inlets of Hill, Macona, Nara and Gulnare are remnants of a period of eustatic change during which valleys were flooded, these features are unusual in continental islands in the GBRWHA.

The 'woodpile' is a prominent rock formation in Pinnacle Bay Hook Island. It is technically known as a dyke and is the result of molten magma that forced its way between cracks in the original rock and then solidified into granite with horizontal columnar segments giving the appearance of a stack of wood (Colfelt 1995).

Also noteworthy are Gloucester, Shaw, Thomas and Hayman Islands; which are the only granitic islands in the Planning Area.

The continental islands in the Whitsundays have acted as a barrier to northward migrating fine sediments from the southern catchments of the Proserpine/O'Connell Rivers, resulting in discreet mud deposits in the sheltered inshore bays and the development of inshore fringing reefs with a tolerance to high turbidity (Blake 1996).

In the Whitsundays the seafloor is swept by strong north-west and south-east flowing tidal currents which influence the distribution of sediments on the seafloor (Jones 1993). Within the Whitsunday Passage strong tidal currents maintain an environment relatively free of fluvial sediment, providing an environment suitable for the development of fringing reefs in clearer water. Closer to the mainland coast the tidal currents have eroded deep channels, as at Grimston Point, and piled up linear shoals of sediments near the islands.

Actions and Guidelines

The University of Queensland is currently mapping the geology of the area. This project may identify additional sites of importance.

The Beach Protection Authority (BPA) has determined 'erosion prone areas' along the coastline and has identified appropriate activities in these areas as part of a Buffer Zone Policy Statement. These areas will be included in the 'control districts' that are to be declared under the Queensland Coastal Protection and Management Act.

An assessment of present and past sedimentation processes operating along the Whitsunday coastline is currently being conducted as a part of the QDoE Coastal Protection Strategy. A significant part of the Planning Area is included in this study.

General

- Encourage further research into the geology and geomorphology of the Planning Area.

Beach Protection

- Some beach works may be required immediately adjacent to resorts but the resource should be given a very high level of protection.
- Ensure that development proposals consider the impact on geological features, the erosion hazard and recommendations identified in the a Buffer Zone Policy Statement.
- Undertake erosion control works in accordance with the recommendations of the BPA.
- Allow beach works to be undertaken where necessary adjacent to resorts and approved tourism developments and recreational areas.
- Sediment will not be sourced from beaches within the Planning Area (other than the beach where works are being undertaken). Sediment from outside the Planning Area should only be considered where it can be demonstrated that environmental impacts to the Planning Area are insignificant.
- Require monitoring of beach profiles and sediment movement to be a condition of any beach works.

Managing Impacts of Use on Physical Features

- Design and locate island facilities at stable sites away from erosion prone areas in accordance with recommendations from the Beach Protection Authority and Site Plans.
- Ensure that recreational activities which may have an impact on physical features (eg abseiling and scramble tracks) are appropriately sited and controlled.

6.8 Maintaining Water Quality

Pollution of the marine and island environments can seriously threaten natural values, resource utilisation and visitor enjoyment of the Planning Area. Potential sources of pollution of the marine and island environments include: runoff of sediment, agricultural chemicals and fertilisers from the adjacent mainland; discharge of sewage from the islands, mainland and vessels; garbage thrown from boats or left on islands; chemicals such as oil either deliberately or accidentally discharged from vessels; and antifouling paint and fuel residues from marinas, boat-yards and vessels.

Marine pollution is regulated through both Commonwealth and State legislation. Under Annex I (oil) and Annex V (garbage) of the International Convention for the Prevention of Pollution from Ships (MARPOL Convention), and the implementing Commonwealth legislation (*Protection of the Sea (Prevention of Pollution from Ships) Act 1983*), the discharge or

disposal of oil and garbage from all vessels is prohibited throughout the GBRMP, with fines of up to \$1 million. This applies to all ships, including fishing vessels and recreational craft which are prohibited from operational discharges of oily wastes between the coast and the outer edge of the GBR. Likewise, the only garbage which can be disposed of is small quantities of food waste for the specific purpose of fish feeding and in accordance with GBRMPA guidelines.

Under the same MARPOL Annexes, ports and marinas are obliged to provide adequate reception facilities for waste oil and garbage. The Mackay Port currently provides such facilities, though they have yet to be installed at the Ports of Abbott Point and Hay Point, to the north and south, respectively, of the Planning Area. Outside Queensland coastal waters, Annex IV of MARPOL, once passed, will prohibit the discharge of sewage from vessels greater than 400 gross tonnes.

The International Maritime Organisation (IMO) has prepared guidelines for the management of ships' ballast water. Compliance with these guidelines is monitored by the Australian Quarantine Inspection Services to minimise the introduction of unwanted aquatic organisms and pathogens (Queensland Transport and AMSA 1996).

The *Queensland Transport Operations (Marine Pollution) Act 1995* deals with prescribed forms of ship-sourced pollution affecting Queensland's coastal waters, including oil, oily residues, chemicals, chemical residues, sewage and garbage. The Act distinguishes three different classes of ships: small (10 metres or less); medium (>10 metres); and large (>200 gross tonnes) and proposes that coastal waters will be zoned according to sensitivity to the impacts of pollution. The Sensitivity Zones are:

- High - including waters within 500 metres seaward of a reef edge;
- Moderate - waters within 500 metres of the seaward limit of a high sensitivity zone; and
- Low - all other coastal waters.

Small and medium ships will be prohibited from discharging into a high or moderate sensitivity zone, but will be able to discharge into a low sensitivity zone. Discharge from large ships is prohibited throughout coastal waters of Queensland. This Act also requires that sewage reception facilities, adequate to meet the needs of visiting ships, be provided in all marinas and ports. From January 1998 all medium and large ships will be required to be fitted with holding tanks. This legislation will be administered in the Planning Area by the Regional Harbour Master at Mackay.

GBRMPA and QDoE are conducting a program to monitor water quality throughout the GBRMP. Four of the sites selected for the water quality monitoring program are in the Planning Area.

6.8.1 Oil

Oil pollution legislative controls and a REEFPLAN (Marine Pollution Contingency Plan) cover the GBRMP. The risk of an oil spill is high and despite the contingency plan it would be almost impossible for logistic, access and cost reasons, to prevent significant environmental damage and impacts on dependent tourism and other industries. It is therefore imperative that the risk of oil spills is minimised.

The International Maritime Organisation (IMO) is concerned with the safety of shipping and the protection of the marine environment. Under the IMO designation of the GBR as a 'Particularly Sensitive Area' the requirement for compulsory pilotage is a means of reducing the risk of grounding or collision in certain sections of the GBR. It is an offence under the *Commonwealth Great Barrier Reef Marine Park Act 1975* to navigate a regulated ship without a pilot in the compulsory pilotage area.

Actions and Guidelines

- Promote, and in the event of an oil spill implement, REEFPLAN.
- Ensure that 'first strike' equipment and operational capability is available at Airlie Beach and Shute Harbour.
- Where appropriate, incorporate messages into interpretive materials about minimisation of bilge-sourced oil.
- Encourage public reporting of oil spills and sightings of wildlife affected by oil spills and promote public involvement in the treatment of oil spill victims.
- Develop a Whitsundays oil spill and wildlife clean-up plan.

6.8.2 Sewage, Liquid Waste and Garbage (vessel sourced)

Vessels fitted with holding tanks are currently not permitted to discharge sewage within five hundred metres of the edge of a reef in the GBRMP. Vessels without holding tanks may discharge sewage as part of normal vessel operations. GBRMPA can require commercial operators, as a Marine Parks permit condition, to fit holding tanks on vessels. This is usually required of commercial operators with vessels that spend most of their time at one location. Future implementation of the new Queensland *Transport Operations (Marine Pollution) Act* 1995, expected in 1997/98 will see regulation of sewage discharge by vessels in Queensland coastal waters, and holding tank requirements for vessels above a certain size.

Other discharges from vessels include waste oil, anti-fouling paints and cleaning of vessels. Ballast water is not relevant to the Whitsundays as there is no large ship berthing in the area. Use of tributyl tin for anti-fouling of small vessels is prohibited under Queensland legislation and is not permitted on marine structures under Marine Park permits.

Under Annex IV (sewage), which is not yet in force, MARPOL proposes to prohibit discharge of sewage from vessels in the GBRMP and require sewage reception facilities in marinas and ports, which is complemented by the Queensland legislation. The Annex is subject to further negotiation and is not likely to come into force for some years.

In addition to management of sewage discharge the QUEENSLAND *Transport Operations (Marine Pollution) Act* includes requirements for on-shore waste and garbage reception facilities, and prohibitions on waste and garbage discharge into certain waters.

Actions and Guidelines

- Assist appropriate authorities to implement Annex IV of MARPOL, and the Queensland *Transport Operations (Marine Pollution) Act* when enacted.
- Vessels operating in the Planning Area will require holding tanks in accordance with the requirements of the Queensland legislation.
- Require all new marinas to install vessel sewage reception facilities.
- Increase vessel operators awareness of the impacts of sewage on marine environments.

6.8.3 Sewage (land sourced)

Under the Central Section Zoning Plan and the Townsville/Whitsunday Marine Park Zoning Plan the operation of a sewage discharge pipe, and the discharge of waste from the structure into the Marine Park, requires permission. GBRMPA has also adopted the policy that all point sourced sewage discharged directly into the GBRMP, be tertiary treated. There are currently five resorts which hold permits to discharge treated sewage directly into the GBRMP, subject to conditions and standards set out by GBRMPA.

Similarly, under Queensland's *Environmental Protection Act* 1994, administered by QDoE, the operation of a sewage treatment plant is defined as an 'Environmentally Relevant Activity' which requires approval and must be managed without causing environmental harm.

Annual and random inspections of sewage plants and outfalls into the Marine Park are undertaken by GBRMPA and QDoE. GBRMPA and QDoE are liaising with local

government about improving mainland facilities, using means such as recycling treated effluent for land irrigation, to minimise ocean discharge.

Actions and Guidelines

- Continue the requirement to tertiary treat sewage discharged directly into the Marine Park.
- Continue liaison with relevant authorities to achieve the installation of nutrient removal facilities, or to direct sewage discharge onto land.
- Encourage the use of pollution free detergents.
- Require sewage treatment plants to be operated in accordance with the Queensland *Environmental Protection Act 1994*.

6.8.4 Garbage (land sourced)

Garbage disposal from resorts is controlled by lease agreements and all garbage must be removed to the mainland. Litter within the Parks has been reduced since the introduction of a 'ship-it-in, ship-it-out' campaign, however littering still occurs on islands and in Marine Parks.

Under the Zoning Plans, a permit is required for the dumping of land sourced spoil, garbage or any waste in the GBRMP.

Actions and Guidelines

- Liaise with appropriate authorities to ensure that adequate garbage disposal facilities are provided for receiving garbage at marinas and ports.
- Encourage public and corporate involvement in cleaning up polluted areas.
- Continue to educate park users about the impacts of garbage, the need for correct disposal, penalties for infringements, and promote the 'ship it in, ship it out' campaign.
- Implement on the spot fines for littering.

6.8.5 Terrestrial Runoff

GBRMPA is currently undertaking extensive research into the effects of terrestrial runoff of sediments and nutrients on the GBR. A GBRMPA research program commenced in 1993 to study the variation in water and sediment nutrient levels and correlation with benthos condition at varying distances from the mouth of the O'Connell and Proserpine Rivers. In addition, GBRMPA, Queensland Department of Primary Industries (QDPI) and QDoE are working to reduce terrestrial runoff effects on the GBR in liaison with other government departments, farmer organisations and Landcare groups through programs such as Integrated Catchment Management, the Coastal Protection Strategy, and the appointment of a GBRMPA water quality liaison officer.

Actions and Guidelines

- Continue to liaise with landowners and appropriate authorities to maintain or revegetate natural vegetation buffer strips along water courses and on steep slopes; discourage application of fertilisers and chemicals to resort lawns, golf courses etc in areas that drain or leach into the sea; minimise sediment runoff from road and construction activities; and provide for other control measures as required.
- Continue to undertake, encourage and cooperate with research into methods of controlling runoff and its effects on the GBR.
- Continue water quality monitoring in conjunction with other relevant authorities.
- Assist in the development of interpretive programs such as Landcare to inform landowners about the effects of run-off and the need for careful land management.

7. CULTURAL HERITAGE CONSERVATION

Desired Outcomes:

- To ensure that features of cultural and heritage value be recognised and provided for in management of the Planning Area.
- To ensure that the sites of recognised historic and/or cultural significance be preserved and/or interpreted appropriately.
- To ensure that the interests of Aboriginal people are reflected in management of cultural resources.

7.1 Aboriginal

Aborigines of the Gia and Ngaro clans inhabited the Planning Area since at least 10,000 years ago (Tindale, 1974, Barker 1992). From the little archaeological and historical evidence that is available it is estimated that more than 300 Aboriginal people lived on the islands at the time Cook visited the area in 1770 (Barker, 1992). Cook, and explorers after him, constantly refer to large scale fires on the islands and mainland and to the presence of Aboriginal water craft. They comprised a 'dynamic and wonderfully adapted society' (Barker 1992) with significant adaptations to utilise marine resources. By the 1880s, barely 20 years after non-Aboriginal settlement of the region, the local Aboriginal people and their culture had been virtually destroyed in retaliation for their resistance to occupation (Barker 1992).

Evidence of Aboriginal occupation includes: a quarry of international significance; a nationally significant rock art site; other rock art sites; middens; and stone fish traps. Three of these sites are specifically mentioned in the Register of the National Estate.

In Australia, the ICOMOS (International Council on Monuments and Sites) Charter for the conservation of places of cultural significance - the Burra Charter - has been adopted and used to conserve cultural and heritage sites. It defines the principles and procedures to be observed in the conservation of important places.

Sites of cultural significance may be threatened by natural attrition, disturbance by animals and by human activities such as vandalism, resource utilisation, management activities, developments and recreation. Some sites have already been damaged or destroyed.

The best known and visited cultural site in the Whitsundays is the Nara Inlet rock art site on Whitsunday Island which is now only accessed by a boardwalk in order to minimise impacts. A management plan for the site has been developed and includes recommendations for day-to-day management of the site, maintenance of the boardwalk structure, and strategies for improving the aesthetic qualities of the site.

Through an ongoing process of consultation with the Giru Dala Aboriginal Community sites of cultural significance in the Whitsundays are still being identified and mapped by QDoE.

As part of the development of a cooperative working relationship, Aboriginal Rangers have been appointed and trained by QDoE at Airlie Beach and have been actively involved in day-to-day management.

7.2 Non-aboriginal

Following the settlement of Bowen, Proserpine and Mackay districts in the 1860s, the Whitsunday islands were developed for timber harvesting and stock grazing. Low scale tourism began on South Molle and Lindeman Islands in the 1920s and has expanded in the region ever since.

Relics of European occupation of the islands are associated with early exploration and industry, particularly timber felling and milling, mining, grazing and tourism. Evidence of island occupation includes shipwrecks, tramways, fencelines, sheds and tools representing former grazing activities, timber extraction and indications of early resort development.

Actions and Guidelines (Aboriginal and Non-aboriginal)

General

- Maintain the Community Ranger Training and Employment Program.
- Train staff in the recognition and significance of Aboriginal and non-Aboriginal sites and relics and management requirements.
- Continue to involve staff in Cross-Cultural Awareness Training courses.
- Develop management guidelines for all cultural and heritage sites in consultation with relevant groups.

Consultation

- Continue with the cultural zones/issues of interest project to ensure ongoing consultation with the Giru Dala community in relation to cultural matters.
- Consult with the Northern Region Cultural Heritage Manager (QDoE) on all matters regarding management of cultural heritage.

Research

- Undertake site surveys to determine any cultural and heritage values prior to permitting or undertaking any influence likely to effect these values.
- Encourage further research into the cultural and heritage values of the Planning Area.
- Cooperate with appropriate organisations and individuals undertaking cultural heritage research.

Education

- Encourage and involve Aboriginal groups and local history groups in upgrading cultural and historic resource information.
- Determine interpretive methods to promote and develop cultural understanding and to assist in management and preservation of relics .
- Upgrade the Whitsunday Information Centre to include information about Aboriginal cultural and traditional values and heritage and European heritage .
- Where required, develop and maintain site interpretation at cultural and historical sites (eg Nara Inlet rock art site).
- Develop interpretive material for cultural and historical values of the Planning Area (eg Cid Harbour).

8. TOURISM AND RECREATION (non-extractive)

Desired Outcomes:

- To provide opportunities for a diverse range of recreational use consistent with the natural, cultural and heritage values in the Planning Area
- To minimise the impact of recreation and visitor facilities on natural, cultural and heritage values.
- To minimise conflicts between different user groups and the impact on visitor experiences.
- To enhance visitor understanding, appreciation and enjoyment of the area.

The natural resource values attract many people to the Whitsundays, tourism and recreation are the major uses. In the 500 kilometres of island coastline there are about 70 kilometres of beach, many of which comprise coarse shingle or coral rubble. Other beaches are fringed by reef or mud flats which restrict access at high tide, and/or are exposed to south-east winds which often prevent safe anchorage. Only about 5% of the island coastline in the Planning Area comprises sandy beaches which are accessible and suitable for tourism and recreation (Valentine 1985).

A substantial increase in tourism and tourist development in the Whitsundays has occurred since the 1960s. Each year the Whitsunday parks are visited by many local residents and about 264,000 tourists visited the region in 1994/95 (QTTC 1996). Tourism to the area is growing at a rate of 3% per annum and is expected to increase rapidly in the future. In 1993/94 there were approximately 1,525,000 visitor nights spent in the Planning Area and it is anticipated that by the year 2000 this will increase to 3,640,000 visitor nights (QTTC 1996).

The Whitsundays is one of the most important holiday destinations in the GBRWHA. With a reputation as 'arguably the best cruising grounds found anywhere in Australia' (Colfelt 1993) it provides a variety of tourism and recreational activities on islands, waters and reefs and at beaches, resorts and campsites, with most visitors being attracted to the Whitsundays by the area's natural values.

It is anticipated that recreational use of the area will increase with residential and tourist growth. Currently there are over 94,000 residents in the Whitsunday, Mackay, Pioneer and Bowen Local Government Areas and it is projected that the population will reach 117,629 by the year 2001 (Australian Bureau of Statistics 1992, Whitsunday Tourism Association 1992, Queensland Department of Housing and Local Government, 1995). In addition, as of January 1996, there were 8147 private boats registered in the Bowen to Mackay area (Mackay Region), 7476 (92%) of which are classed as 'speed boats', 6363 (78%) are under 5m in length, and 200 are sailing boats.

Use of the Marine Parks is regulated by the provisions of the Zoning Plans. Private users have the right to enter most zones without a Marine Parks permit for purposes approved in the Zoning Plans. Tourism programs require Marine Parks permits.

In National Parks, private and commercial use is regulated by the provisions of the Queensland Nature Conservation Act. Private users have the right to enter the parks for uses that are consistent with the management obligations outlined in Section 2 (Part A). All commercial uses require written permission from QDoE.

Decisions on managing recreational impacts depend upon assessments of factors such as the location, type and frequency of the activity, the numbers involved, the experience sought by visitors, conflicts between users, and the risk and nature of the potential damage to an area's scenic, natural, cultural and heritage values. Park management in the Whitsundays will aim to accommodate various levels of use in different areas of the parks, rationalise competing uses and provide opportunities for a wide range of activities while ensuring that the values which attract many visitors are preserved.

Site monitoring suggests some sites, such as Butterfly Bay (Hook Island) and Whitehaven Beach (Whitsunday Island), have experienced environmental degradation and that the existing facilities (eg. markers and toilets) are inadequate to cope with current visitor numbers. A significant increase in management resources is urgently required to cope with the projected increases in visitation. At some sites limits on the number of visitors are being imposed to maintain the physical and aesthetic character of the sites.

More than 373 Marine Parks permits are currently valid for tourist programs in the Whitsundays, offering a diverse range of activities such as scuba diving, snorkelling, sailing, watersports, beach hire, fishing, fish feeding, bareboating, beach games, reef walking, coral viewing, whale watching, and day visits to island beaches.

The Whitsundays, approximately 1.5% of the total GBRWHA area, currently attracts over 30% of the total tourist visitation to the GBRMP. Recent growth in visitation has outstripped the ability of management to cope with impacts of use, resulting in anchor damage to fringing reefs, disturbance to vulnerable wildlife and island vegetation, and social impacts such as crowding and displacement. Displacement is most apparent in areas that have minimal use, where increased visitation may now threaten unique wilderness and cultural values.

8.1 Settings for Tourism and Recreation (see Figure 5)

In recognition of the importance of the Whitsundays as a tourism and recreation destination, of national and international significance, and in order to meet the objects of plans of management, the reefal and coastal waters of the Whitsundays have been assigned settings which provide a spectrum of tourism and recreation opportunities from 'Setting 1: Developed' to 'Setting 5: Restricted'. The restrictions on use in each setting will apply to all users (unless otherwise stated) to ensure that tourism and recreation settings are not compromised.

In assigning the Settings it was necessary to consider:

- Areas of high nature conservation values including fringing reefs, mangroves, seagrass beds, significant seabird/shorebird areas and rare and threatened wildlife.
- Areas or sites of cultural and heritage significance.
- Areas of high scenic integrity and landscape and seascape sensitivity.
- Recreational opportunity. Outdoor recreation activities in the Whitsundays occur in settings which vary from highly modified resort environments to restricted, remote or natural environments.
- Existing infrastructure, especially resorts.
- Marine Park zoning. The Zoning Plan regulates activities such as fishing and collecting within the Planning Area. Generally changes to the Zoning Plan are not proposed.

The principal aims of the Settings are to:

- protect all areas, especially those of high conservation significance;
- ensure a range of recreation opportunities appropriate to the Planning Area;
- rationalise competing or conflicting recreation activities; and
- comply with the Marine Park and protected area legislation, regulations and various plans where applicable.

The Plan specifies five Settings for the Planning Area and indicates the appropriate recreational activities and facilities for each Setting. Where sites of high conservation significance occur in areas proposed for a higher level of development and/or use, they will be protected by specific strategies. Section 8.1.1 summarises the objectives, broad criteria and management prescriptions for each Setting. Figures 5 illustrate the location of Settings and Section 8.1.2 summarises the facilities, craft, group sizes and activities appropriate to each Setting.

Settings have also been developed for National Parks and these will be applied through the National Park management planning process. In the intertidal area at focal access points to the island National Parks (eg. popular beaches), it is important that the Settings for Tourism and Recreation and the Settings for National Parks correlate to allow complementary management while not eroding National Park values. In areas where access to the National Parks is minimal or not available due to topography, the management of the intertidal area is not as complex and can be achieved through the Settings for Tourism and Recreation.

The Site Plans (see Supporting Document) will apply in those areas requiring additional or more prescriptive management because of the complexity of use, associated impacts and jurisdiction. They will also provide for a coordinated approach to management across Commonwealth and State Marine Parks and National Parks.

8.1.1 Setting Descriptions

SETTING 1 - DEVELOPED	
Immediately adjacent to urban areas and resorts, these areas are the access points to the Parks and a focus for intensive tourism and recreation. Expect these areas to be heavily trafficked by a wide range of craft, and to contain permanent facilities (eg. marinas, jetties and boat ramps).	
Conservation	Although these are intensively used and developed areas, they often contain elements of high conservation value which will require protection through intensive management.
Recreation	Harbours, also favoured for beach hire, motorised watersports and passenger transfers. Emphasis on access and resort style recreation and tourism.
Management	These areas will require detailed assessment of individual development proposals to protect World Heritage Values and may require additional site planning to determine appropriate use patterns eg. moorings placement and access channels. <i>See Matrix at 8.1.2 for appropriate uses.</i>

SETTING 2 - HIGH RECREATIONAL USE	
A natural setting that may have high levels of visitation. These areas are easily accessed, and appropriate facilities may be required to minimise impacts and/or assist in visitor interpretation of the area. Expect these areas to be regularly visited by large vessels.	
Conservation	Although these are high use areas, they often contain elements of high conservation value which will require protection through intensive management.
Recreation	Favoured locations for day use. Emphasis on passive recreation, including provision for large groups of people.
Management	Site Plans will be developed (see Supporting Document) <i>See Matrix at 8.1.2 for appropriate uses.</i>

SETTING 3 - MODERATE RECREATIONAL USE A natural setting that may have moderate levels of visitation with appropriate moorings and management facilities to minimise impacts. Expect these areas to be occasionally visited by large vessels.	
Conservation	Where conservation values are high, management may be required to protect and maintain these values.
Recreation	Favoured locations for day and overnight use by smaller vessels. Emphasis on passive recreation for smaller groups of people.
Management	Site Plans may be developed if required (see Supporting Document). <i>See Matrix at 8.1.2 for appropriate uses.</i>

SETTING 4 - NATURAL A natural setting with low levels of visitation. Expect these areas to be generally free from facilities and large vessels.	
Conservation	Protection of conservation values is generally achieved by remoteness and access restrictions with the aim of maintaining low levels of visitation and impact. Management actions will only be undertaken where essential to protect and maintain these values.
Recreation	Favoured locations for locals and small cruising vessels. Emphasis on isolation and passive recreation for small groups of people.
Management	Site Plans may be developed if required (see Supporting Document). <i>See Matrix at 8.1.2 for appropriate uses.</i>

SETTING 5 - RESTRICTED A restricted natural setting, for areas of outstanding and/or unique conservation value, or of special management concern, which will be closed to visitors unless otherwise stated in a Site Plan.	
Conservation	Conservation values are diverse, outstanding, unique or threatened.
Recreation	Closed unless otherwise stated in a Site Plan.
Management	Site Plans will be developed once resource assessments are completed and appropriate uses can be identified (see Supporting Document). <i>See Section 8.2.8 (Setting 5 access).</i>

8.1.2 Settings Matrix

The following Matrix lists the private facilities, craft, group sizes and activities which are either generally appropriate (GA), or not appropriate (NA), within Settings 1 to 5.

Facilities, Craft, Groups and Activities	Setting 1	Setting 2	Setting 3	Setting 4	Setting 5
Permanent Facilities (eg. marinas, jetties)	GA	NA	NA	NA	NA
Semi-Permanent Facilities, other than private moorings and management facilities (eg. pontoons, helipads, service moorings)	GA	GA	NA	NA	NA
Private Moorings	GA	GA	GA	NA	NA
Management Facilities (eg. public moorings, reef protection markers)	GA	GA	GA	GA	refer to Section 8.7
Hovercraft	GA	NA	NA	NA	NA
Aircraft	GA	GA	GA	GA	refer to Section 8.7
Vessels up to 20 metres in overall length	GA	GA	GA	GA	refer to Section 8.7
Vessels 20 to 35 metres in overall length	GA	GA	GA	NA	refer to Section 8.7
Vessels over 35 metres in overall length	GA	NA	NA	NA	NA
Groups of up to 15 people	GA	GA	GA	GA	refer to Section 8.7
Groups of 16 to 40 people	GA	GA	GA	NA	refer to Section 8.7
Groups of over 40 people	GA	GA	NA	NA	NA
Beach, Dinghy & Bareboat Hire and Goods & Services Vending	GA	NA	NA	NA	NA
Motorised Beach & Watersports, Parasailing, Aerobatics & other 'thrill' activities	GA	NA	NA	NA	NA
Special Events	GA	NA	NA	NA	NA
Organised Beach Games	GA	GA	GA	NA	NA

IMPORTANT NOTES:

- a use not listed in the Matrix is not an 'as of right' use, but is subject to the provisions of the GBRMP Central Section Zoning Plan;
- the Matrix does not apply when transiting, except in Setting 5, or as otherwise stated in a Site Plan (see Supporting Document); and
- some existing uses may not be entirely consistent with the Matrix, but may be allowed to continue (see Section 8.2.11).

8.2 Tourism & Recreation Opportunities - Marine

Visitors to the Whitsundays participate in a wide range of activities including diving, snorkelling, watersports, fish feeding and whale watching. The Settings provide a guide as to which activities and craft are appropriate and have assisted in developing appropriate management strategies.

8.2.1 Hiring & Vending

Shore-based hirers that hire sailboards, paddleboats, canoes, kayaks, dinghies etc, or goods and services vendors operating in the Marine Park, are managed through Marine Parks permits. Shore-based hirers are also regulated by QDoT and may require Local Government approval. These activities are generally based at island resorts and coastal settlements and usually require a facility or beach from which to operate. By attracting users to a site these activities may affect amenity, patterns of use and the level of anchoring. Hiring and vending will be managed through Settings and Site Plans to minimise conflict with other activities whilst providing for reasonable use.

Actions and Guidelines

- Confine hiring and vending activities to Setting 1.
- Liaise with QDoT and Local Government re suitable areas for shore-based hirers.

8.2.2 Motorised Watersports

The Whitsundays is a popular location for both recreational and commercial motorised watersports, including jet-skiing, water-skiing, sausage-riding, boom-netting and tunnel-diving. These activities are regulated by QDoT, who may define an area of operation, and through a Marine Parks permit. Most motorised watersport operations in the Whitsundays are conducted adjacent to the coastal settlements and major resort islands (eg. Airlie Beach and on Hayman, Daydream, South Molle, Hamilton and Long Islands).

Motorised watersports have the potential to impact on other users particularly at popular anchorages and diving, snorkelling and swimming sites. Impacts can be defined in terms of noise pollution and scenic and amenity effects. Motorised watersports can also adversely affect wildlife such as turtles, dugong, whales and nesting and feeding birds.

During both public consultation phases many submissions objected to motorised watersports in Gulnare Inlet (Whitsunday Island) on conservation and amenity grounds. Many also proposed that commercial motorised watersports be restricted to resort areas, though existing operators have been concerned at proposed limits on operating areas.

Park managers should aim to provide opportunities for a range of motorised watersports. These activities will need to be managed so that they do not adversely impact on natural resources or conflict with other visitor experiences. Motorised watersports will be managed through Settings and Site Plans to minimise conflict with other activities whilst providing for reasonable use. The most appropriate location for these activities is adjacent to resorts.

Actions and Guidelines

- Preclude motorised watersports from Settings 2, 3, 4 and 5.
- Liaise with QDoT concerning suitable areas for motorised watersports.

8.2.3 Parasailing

Parasailing, a recreational activity in which a person on a parachute is towed at low speed behind a winch-boat, may involve taking-off from a beach, a structure or from the back of the vessel. Parasailing is strongly influenced by wind and sea conditions and may have the potential to conflict with other more passive activities, and with local aircraft landings and take-offs. Parasailing will be managed through Settings and Site Plans to minimise conflict with other activities whilst providing for reasonable use.

Actions and Guidelines

- Preclude parasailing from Settings 2, 3, 4 and 5.
- Liaise with QDoT concerning suitable areas for parasailing.
- Investigate the impacts and benefits of taking-off from a beach or structure.

8.2.4 Diving & Snorkelling

Diving and snorkelling are popular activities at fringing reef and barrier reef sites and may be conducted from vessels or pontoons. Direct impacts of SCUBA diving and snorkelling are fin damage to fragile reef and the effects on fish behaviour as a result of fish-feeding by divers. 'Resort dives', which are offered to visitors with little or no previous SCUBA diving experience, may have a greater potential for impact on fragile reef due to this limited experience. It is appropriate that such diving experiences be located away from 'sensitive sites'.

Best Environmental Practices for snorkelling, diving and fish feeding are included in the GBRMP Manual which has been distributed to all permitted operators in the Whitsundays.

Actions and Guidelines

- Encourage an awareness of the potential impacts of diving and snorkelling through interpretative materials and industry training.
- Encourage the adoption of Best Environmental Practices for diving and snorkelling (including fish feeding) by commercial operations offering such activities and by recreational divers.
- Investigate the need to restrict resort diving, particularly at sensitive sites.
- Classify dive sites according to the level of dive experience required.

8.2.5 Fish Feeding

Fish feeding is a popular activity which allows visitors to observe and feed schools of reef fish at close range. There are several management concerns about fish feeding including disruption of the ecology by the attraction of fish and seagulls to an area, adverse environmental impacts by the unnatural addition of organic matter and nutrients, adverse effects upon fish health from nutritionally inappropriate food, potential transmission of exotic diseases and parasites, conflict between fishing and fish feeding, and possible injuries from aggressive fish.

Commercial operators must have fish feeding approved on their Marine Parks permit. A large number of permits issued for tourist operations in the Whitsundays allow fish feeding to be undertaken in accordance with conditions and guidelines. In the past, fish feeding has been used by some operations as a means of disposing of food scraps. The Queensland Transport Operations (Marine Pollution) Act now prohibits the discharge of garbage of any type, including food scraps other than fresh fish. The fish-feeding guidelines specify the use of a limited quantity of food, which must consist of fresh, raw marine products and/or manufactured aquaculture fish food pellets, for the feeding activity.

Actions and Guidelines

- Update interpretative material and guidelines for fish feeding activities to be available to commercial and recreational users.
- Require all fish feeding (by commercial and recreational users) to be conducted in accordance with the approved GBRMPA guidelines and Best Environmental Practices (.).
- Where required, resolve conflicts between fish feeding and fishing.
- Investigate the practice of fish-feeding to determine the impacts on fish behaviour and ecology and the dangers to visitors and apply appropriate controls where necessary.

8.2.6 Whale Watching

Between May and September each year whales visit the waters of the Whitsundays during their migration from the Southern Ocean in search of warmer winter waters for calving,

before returning south for summer. Over recent years this has become an increasingly popular spectacle with both commercial and recreational whale watchers.

There are currently seven Marine Parks permits for whale watching in the Whitsundays, which are subject to guidelines based on Regulations under the Commonwealth Whale Protection Act. These Regulations control vessel and aircraft activities that may disturb whales. Plans for the conservation of whales are currently being prepared under the Queensland Nature Conservation Act (Queensland Whale Management Plan) and the Commonwealth Endangered Species Protection Act.

Actions and Guidelines

- Require all whale watching activities (commercial and recreational) to be conducted in accordance with the GBRMPA guidelines and other relevant legislation and codes of conduct.
- Limit whale watching permits to the current number.
- Continue to restrict commercial whale watching activities within the 3 nautical mile territorial sea limit.
- Encourage commercial operators to develop a code of practice for commercial whale watching.
- Restrict a person, vessel or aircraft from approaching within 300 metres of a whale within the 3 nautical mile territorial sea limit and within 100 metres elsewhere.
- Appoint appropriately trained rangers as inspectors under the Commonwealth Whale Protection Act.
- Develop interpretive material for commercial and recreational whale watching activities.

8.2.7 Reef Walking

Reef walking is a popular activity for exploring the intertidal area or reef flat. It allows people the opportunity to closely interact with the marine environment and to discover a variety of marine plants and animals.

Although reef walking is enjoyable, and offers excellent educational opportunities, there can be impacts to the reef associated with this activity such as:

- damage to fragile organisms by trampling;
- disturbance to marine plants and animals through handling and exposure;
- illegal and/or excessive collecting; and
- proliferation of litter.

Reef walking can also be dangerous to the participants through contact with stinging organisms, exposure to the sun and cuts and abrasions from rocks and coral which are susceptible to infection.

Reef walking may conflict with other activities (eg snorkelling), because of its potential to damage the reef and to impact on the amenity of other visitors.

Actions and Guidelines

- Ensure that all reef walking is undertaken in accordance with the GBRMPA Code of Practice for Reef Walking.
- Discourage reef walking outside established reef walking areas (eg Hardy Reef).
- Allow commercial supervised reef walking at existing permitted locations only (eg Hardy Reef and Black Island).
- Investigate the need for additional management at existing reef walking locations to minimise impacts (eg reef walking trail).

8.2.8 Setting 5 Access

Within the Whitsundays there are areas of outstanding and/or unique resource value which have been assigned the highest level of protection under this plan (Setting 5: Restricted). These areas require comprehensive resource assessment and the development of management

controls before appropriate uses can be identified. Use of these areas will not be permitted until site planning has been completed. Future use opportunities for each location will be detailed in a Site Plan, which, once finalised, will be used to allocate use consistent with the selection criteria and access restrictions stated.

Actions and Guidelines

- Preclude access to Setting 5, other than by Park managers, until the relevant Site Plans are finalised.
- Implement the provisions of the Site Plans once finalised.

8.2.9 Bareboats

A number of factors, including the geography, scenic and natural values and recreational opportunity, have made the Whitsundays one of the most popular bareboating areas in the world. A bareboat is defined as a 'skipper yourself' vessel (in excess of 6 metres in overall length) where the charterer is the person responsible for the operation of the vessel while it is on charter. 'Sail guides', who are not required to be qualified skippers, are provided upon request.

QDoT regulates the size, passenger capacity, cruising range and other aspects of bareboat survey registration. Harbours and Marine regulations also require bareboats to anchor overnight in safe locations. In addition the bareboat hire operators may have their own rules regarding the choice of anchorage and arrival time and prefer bareboats to be anchored up early, in the safest locations.

In December 1996 there were 36 valid Marine Park permits to conduct bareboat hire operations in the Whitsundays, with provision for 323 bareboats. These permits are generally held by agencies managing large numbers of vessels or by individual owners operating up to a few vessels.

The increase in the number of bareboats available for hire has raised a number of management concerns, in particular overcrowding of suitable overnight anchorages, the potential for environmental impacts including anchor damage and groundings due to the inexperience of clients and the mixed standards of operation within the bareboat industry. Administrative concerns focus on unused permit capacity ('latent capacity') and the inefficiencies in the permit administration system.

Also of concern is the growing practice of 'sail guides' escorting 'flotillas' of bareboaters and/or bareboats to preferred locations, rather than allowing 'true wandering'. This puts pressure on some popular sites; often those used by site dedicated tourism operators. Time sharing and group ownership of vessels has also become an issue in the Whitsundays and will be subject to the same requirements as bareboats.

As a result of continued concern in relation to unmanaged growth in tourism, particularly from the Whitsunday Bareboat Operators Association, managers and local community, a moratorium on the grant of certain permissions was issued by the Authority in July 1996 (refer Section 5.5). On 13 December 1996, the Authority also decided:

'to adopt a policy not to allow any increase in the number of bareboats permitted to operate in the Whitsundays, currently 323, noting that a comprehensive management package for bareboats for the Whitsundays is being prepared' (MPA Decision 163/8).

This decision by the Authority was based on management concerns at certain sites; existing latent capacity; a number of pending applications to significantly increase permitted bareboat use, all of which pre-dated the moratorium, and therefore required a permit decision; and limited management resources available for management of the Whitsundays.

Actions and Guidelines

- Restrict bareboats in accordance with the Settings and Matrix, particularly in relation to hiring, craft and group size restrictions.
- Require all time shared vessels to be permitted under Marine Park permits as per bareboats.
- Cap the total number of bareboats permitted to operate in the Whitsundays at 323.
- Review options for reducing the existing latent capacity and subsequently for allowing future controlled growth.
- Require all bareboat operators to meet agreed Bareboat Industry Standards (see Supporting Document).
- Preclude bareboat operators from conducting 'flotillas' under existing Marine Parks permits for bareboat charter.
- Investigate the impacts and benefits of 'flotillas' and determine whether this practice is appropriate.
- Develop training and interpretive materials specifically for bareboat operators and their clients (see Supporting Document on Bareboating).

8.2.10 Aircraft

Aircraft, particularly seaplanes and helicopters, are an important tourism component in the Whitsundays. They enable exceptional panoramic views and fast transport to key attractions and resorts. Once on the water, a seaplane operates much like a vessel, taxiing in and out of areas or up to the beach as required. Helicopters have the added capability to access confined areas from the air such as small beaches and lagoons. Many commercial aircraft operations now offer introductory and training flights from airstrips adjacent to the Whitsundays.

Aircraft operations are regulated with regard to safety under the Commonwealth Civil Aviation Act. The GBRMP includes air space to 3,000 feet (approx. 915m) above the ground or water. Under the Zoning Plan, aircraft may fly through the GBRMP, at an altitude of not less than 500 feet (approx. 150m) above the ground or water, without a Marine Parks permit provided they are not operating a tourist or other commercial program. The Queensland Nature Conservation Act also provides for the control of aircraft over National Parks.

Aircraft activities, such as low flying aerobatics, landings, take-offs and taxiing, have the potential adversely impact park values and/or park users. Nesting and feeding birds are particularly vulnerable to disturbance by landing, taking off, low flying and hovering aircraft (Hicks *et al* 1987). Aircraft can also disturb and alter the behaviour of marine mammals such as whales. Regular aircraft landings and take-offs on beaches can cause erosion problems and may conflict with the appreciation, enjoyment and safety of existing or potential users of the area. Operating an aircraft on beaches can also interfere with engine and turbine operation.

The Commonwealth *Whale Protection Act* 1980 and the Queensland *Nature Conservation Act* 1992 regulate the operational height of fixed wing whale spotting aircraft. State legislation prohibits the use of helicopters as spotter aircraft.

The management of commercial aircraft operations requires consideration of factors not generally encountered in the management of vessel operations. In particular these relate to:

- the ability of aircraft to cover substantial distances in a relatively short time enabling them to operate day trips to locations that are only available to vessels on extended trips;
- the ability of aircraft to visit a greater range of locations on a single day trip;
- the potential for aircraft to impact on both the physical environment (eg. marine mammals and birds) and on the amenity (eg. noise and visual impacts) and safety of other users;
- the ability of aircraft to conduct repeat visits over a short time period ('shuttling') and;
- the landing needs for aircraft requiring access to protected areas free from obstructions.

Under a revised Marine Parks permit for aircraft operations in the Whitsundays, aircraft are required to land and take-off in preferred, nominated areas for purposes which have been agreed upon through a process of consultation with local aircraft operators, the Whitsunday Coastal Advisory Committee and AMPTO. Some additional conditions specific to operation at Whitehaven Beach also apply. All permitted aircraft in the Whitsundays excluded from identified sensitive bird nesting sites during the period specified (see Table 1).

Actions and Guidelines

- Manage aircraft in accordance with the Settings and Matrix (specifically group size) and Site Plans.
- Preclude aerobatics from Settings 2, 3, 4 and 5.
- Limit aircraft visitation to locations outside Aircraft Landing Areas (see Figure 6).
- Ensure aircraft continue to have access to preferred landing areas by managing conflicting activities.
- Ensure aircraft only access an alternate landing area when access to the preferred landing area is hazardous.
- Preclude aircraft from approaching within 1,000 metres, and below 1,500 feet (approx. 460m) above ground or water, of the significant seabird/shorebird sites listed in Table 1 during the period specified.
- Preclude aircraft from conducting scenic flights below 1,000 feet (approx. 305m) above ground or water.
- Limit beach landings and take-offs to helicopters only.
- Investigate the need to confine helicopter landings and take-offs to nominated landing areas.
- Limit National Park and above HWM landings and taking-offs to permitted helicopters at designated helipad sites.
- Consult with permitted operators and government authorities including the Civil Aviation Authority, the Department of Defence, the Regional Airspace Users Advisory Committee (RAPAC) and other relevant individuals and organisations in relation to further aircraft management.

8.2.11 Large Vessels

The Whitsundays provides unique opportunities for small vessel activities, by locals, transients and tourists alike. The protected waters and scores of sheltered bays make ideal locations for day and overnight anchorage, and the proximity of one anchorage to the next provides for a range of cruising opportunities. Small vessels are welcomed at the numerous resorts and marinas around the Whitsundays which offer overnight accommodation, entertainment and shops. The size and popularity of the bareboat industry highlights the international recognition of the Whitsundays as 'Australia's best cruising ground'.

As such, the use of the Whitsundays by large tourist vessels has been highlighted as an issue. Large tourist vessels form about 10% of the tourism fleet and carry almost 50% of visitors to the Marine Parks.

Large tourist vessels fall into four basic categories; water taxis, site specific vessels, long range roving operations and short range roving operations. The issues that particularly relate to large vessels are: beach and island access; waste discharge; coral damage from anchors and passengers; amenity; displacement; and use opportunity conflict.

The most significant large vessel activity is by water taxis, transferring passengers between the mainland and the island resorts. Whitehaven Beach, Hardy Reef, Blue Pearl Bay, Stonehaven Anchorage, Caves Cove and Bait Reef receive over 80% of the visitors carried by large tourist vessels to the Marine Parks each year (source: EMC data).

Although only large vessels are involved in many different styles of operation, they represent part of the range of uses within the GBRWHA. Large vessels are generally more

capable of handling longer distances and unprotected waters. They can readily gain access to remote areas of the GBR. By providing for a range of uses in the GBRMP, emphasis should be placed on maintaining opportunities for smaller vessels in coastal waters, whilst allowing for reasonable large vessel activity. Large vessels will be excluded from some areas, noting that in other areas, existing large vessels may need to be accommodated, subject to conditions.

Actions and Guidelines

- Manage large vessels in accordance with Settings and Site Plans.
- Where required, consider the need to provide established large vessels reasonable, continued access to historically used locations.

8.3 Tourism & Recreation Opportunities - Island

Visitors to the island National Parks participate in a range of activities including camping, walking, abseiling and climbing. A number of hardened campsites, catering for differing group sizes, are available throughout the islands, and graded walking tracks provide access to remote island locations. The sandy island beaches are a focus for recreation by day visitors. Whitehaven Beach, is the setting for an annual beach party which attracts approximately one thousand visitors whose activities extend onto the National Park.

Management of island tourism and recreation includes administration of camping permits for both private and commercial campers. All operators promoting and conducting guided tours and activities on the island National Parks are required to hold a Commercial Activity Permit which defines the approved activities and sets conditions for operation.

8.3.1 Island Day Visits

Day visits to island National Parks are undertaken by many locals and the majority of visitors to the Whitsundays, most being transported by commercial vessels as part of day or extended trips offering a variety of activities. Bareboat charters and visitors in private vessels commonly anchor in island bays, with shore activities such as bushwalks and picnics. Day visitor activities tend to be focused on the beach and adjacent island vegetation, where National Park facilities, such as tables and toilets, have been provided. Tourism operations require a Commercial Activity Permit to visit National Parks (see Section 8.6.4).

Increasing visitation to island National Parks by day visitors transported as passengers of commercial vessels places pressure on heavily used sites and facilities, such as at Whitehaven Beach, the most popular island day visit destination in the Whitsundays.

The impacts of day use, particularly by large groups of visitors, include trampling of sensitive coastal vegetation, litter, fire rings and fire damage, excessive pressures on facilities and disturbance to nesting seabirds and turtles.

Actions and Guidelines

- Require all tourism operations in the Whitsundays conducting day visits to beaches and island National Parks to obtain necessary permissions.
- Preclude the lighting of fires on beaches and island National Parks.
- Restrict beach access by all visitors at important bird nesting sites, during the period specified (see Table 1).
- Monitor the levels and patterns of use of popular sites and the associated impacts and where required, restrict day visits through Site Plans eg video time-lapse monitoring of Whitehaven Beach.
- Provide appropriate interpretive materials for visitors to Whitsunday islands including advice on Best Environmental Practices when ashore.

8.3.2 Camping

The islands currently offer opportunities for campers to enjoy nature based, low cost overnight stays at remote island destinations, at more than 20 dedicated National Park camp sites and at private commercial camping sites. All campers at National Park camp sites are required to obtain a permit from QDoE. The campsites range in their camper capacity and availability of facilities. The location of National Park campsites are illustrated in Figure 7.

Delivery to campsites is provided by a number of permitted charter vessels and water taxis. QDoE statistics for the Whitsundays record 3074 campers spending a total of 8518 nights in 1994, and 1932 campers spending 5861 nights in 1995. Over 80% of National Park camping occurred at just five sites: Whitsunday Island - Whitehaven Beach, 47.5%; Dugong Beach,

16.8%; Sawmill Beach, 5.8%; Joe's Beach, 4.1%; and North Molle Island - Cockatoo Beach 6.5% (Source: Camping Permits records 1994 & 1995).

The impacts of camping include effects on the physical environment and on the expectations and experiences of other users of the site. The physical impacts of camping are more likely to be focussed on and around the campsite and may be apparent as:

- compacted areas where tents have been pitched;
- informal trails radiating from the campsite;
- trampling of vegetation and weed infestation;
- erosion;
- scatters of inadequately buried toilet waste;
- scars from illegal fires; and
- modified behaviour from native animals which scavenge for food.

Social impacts are more difficult to define as the interactions between different camping groups and their activities influence an individual's expectations and experiences. High levels of day use, motorised watersports and aircraft landings conducted within the proximity of an island campsite has the potential for greater impacts than if conducted in an area set aside for activities of a non-passive nature.

While the impacts associated with commercial and organised group camping are similar to those mentioned above, there are additional issues and specific management actions that are required to adequately manage the activity (refer Section 8.7.5).

Actions and Guidelines

- Continue to implement the camping permit system.
- Manage campsite capacities and facilities in accordance with QDoE Camping Policy.
- Produce site development plans for all campsites.
- Separate large and small groups, and campsites from day visit areas through Site Planning process.
- Monitor impacts of camping and rotate campsites where necessary to minimise impacts on natural values.
- Preclude campfires in National Parks and below high water mark on all islands in the Whitsundays.
- Require all cooking to be on gas/alternative fuel stoves.
- Maintain interpretative materials for campers that promote awareness of campsites and minimal impact camping practices.
- Manage commercial camping in accordance with Section 8.7.5.
- Introduce method of assessing visitor experiences to assist in review of management strategies eg camper questionnaire.

8.3.3 Climbing and Abseiling

Although there are currently few requests for climbing and abseiling in the Whitsundays, there are some challenging and spectacular rock faces on the islands and requests may increase in the future. Climbing activities can disturb fauna, particularly raptors which favour steep rocky habitats. Rocks dislodged by climbers could pose a danger to other visitors and scramble tracks can lead to erosion. In the past, equipment such as bolts and pitons were used to assist climbers. These can damage rock faces and have largely been replaced with other climbing aids which cause little damage.

Actions and Guidelines

- Develop an abseiling and climbing policy in consultation with accredited abseiling and climbing associations, with particular reference to hardware and equipment, public safety, access and permits.
- Identify suitable sites for abseiling and climbing in consultation with accredited abseiling and climbing associations, ensuring minimal disturbance to natural, cultural and heritage resources, particularly raptors.

8.3.4 Special Events & Organised Groups

Park managers are sometimes requested to allow special events, such as large commercial beach parties and fireworks displays to occur in the Marine and National Parks. Similarly, clubs and other recreational groups have requested access to the parks for organised events. Resort islands, Whitehaven Beach and Henning Island have been used for special events on occasion, particularly during Hamilton Island Race Week.

Activities that extend below LWM require a Marine Parks permit. A State Marine Park permit is required for activities between LWM and HWM and are subject to standard assessment and conditions. A permit under the Queensland *Nature Conservation Act 1992* is required for special events or organised groups in National Parks.

The provision of beach games, music, food, alcohol, marquees, advertising and other structures associated with some special events may conflict with nature-based recreation experiences appropriate in Marine and National Parks. Impacts can include littering and other pollution, fire hazards, disturbance to native wildlife and conflicts with other visitors. Organised groups can intrude on the amenity of an area and visitor experience, particularly larger groups or groups conducting beach games.

Actions and Guidelines

- Manage special events and organised groups in accordance with Settings (see Section 8.1.2), particularly in relation to activities and group size.
- Limit special events on Whitehaven Beach to the beach party associated with the Hamilton Island Race Week, and only then on one day per year.
- Require that all special events be conducted in accordance with the conditions specified in Appendix 3.
- Monitor the impacts of special and organised events (eg litter, trampling of vegetation).
- Further promote the use of island resort beaches for special events.

8.3.5 Walking

There are some graded walking tracks provided throughout the Whitsundays and there are opportunities for beach walking, particularly on Whitehaven Beach. Walking is a popular way to explore the Marine and National Parks and experience outstanding scenic and natural resource values.

Both the public and resort guests have access to walking tracks and, with associated interpretation, walking tracks provide an excellent opportunity for education and presentation of World Heritage values.

There are a number of issues associated with walking, in particular: public safety; access to walking tracks; and the creation of informal or illegal tracks.

Actions and Guidelines

- Encourage walking on graded tracks and in some locations along beaches where this is the only method of access to an area.
- Continue to develop and upgrade brochures and other interpretive materials (including signage) on available walking tracks.
- Promote a 'walking softly' approach to walking on graded tracks and beaches.
- Monitor the levels and patterns of use of walking tracks and the associated impacts.
- Liaise with resort managers to ensure that non-resort visitors have access to tracks on both resort and National Park land.
- Do not encourage any adventure off track walking on the basis of safety and physical impacts, particularly to vegetation.

8.4 Management Facilities

While the provision of facilities may assist tourists to see the Marine and National Parks and can help to managing impacts on the environment, they can also damage the environment and affect the character of the landscape, seascape and amenity. Future installation of management infrastructure will therefore be assessed in the context of the Settings and Site Plans.

8.4.1 Moorings and Markers

A large number of bays are available for safe anchoring, reef appreciation and seclusion, however a few are regarded as very popular. Consequently, the reef systems within these bays are being severely damaged through frequent anchoring, chain entanglement and vessel groundings. To reduce the potential for this damage while continuing to provide access, a Reef Protection Program has been initiated by the management agencies. This program consists of two discrete styles of installation - Reef Appreciation Moorings and Reef Protection Markers.

Moorings refer to any buoy anchored to the seabed for the purpose of restraining a vessel or craft and markers are used for designating a position or area (excluding QDoT requirements for navigation). Both Reef Protection Markers and Reef Appreciation Moorings have been installed by QDoE and GBRMPA, assisted by the OUCH volunteer group, at a number of fringing reef sites in the Whitsundays identified as needing special protection from anchor damage.

Pyramid-shaped reef protection markers delineate the seaward boundary of a 'no anchoring area' and moorings aim to reduce the level of anchor damage to living coral, whilst providing for continued access. The various categories of moorings are outlined in Appendix 2. Limits to use of the moorings include vessel size, wind speed and time limits as specified by the park managers.

Although moorings and markers reduce physical damage to reefs they can also affect the natural scenery and require continual maintenance. There has been considerable public support for their installation at sensitive sites.

Actions and Guidelines

- Continue to regulate anchoring on fringing reefs and where necessary install markers and moorings to protect reefs.
- Install moorings in accordance with Site Plans and the categories outlined in Appendix 2.
- Develop dedicated use mooring allocation policy.
- Minimise the visual impact of moorings and marker buoys on the landscape and seascape as far as practicable.
- Ensure proper use of public moorings in line with specifications.
- Regulate to provide for on-the-spot fines for misuse and non-use of moorings.
- Develop, maintain and distribute interpretive materials to explain the Reef Protection Program.
- Monitor the success of the Reef Protection Program.

8.4.2 Island Infrastructure

Facilities provided by QDoE on island National Parks include walking tracks, toilets, camping areas and signs. These facilities enable visitors to appreciate and enjoy the natural, cultural and heritage values of the Planning Area. At some sites facilities such as composting toilets may be subject to considerable pressure from high visitor numbers and require high levels of maintenance.

It is important that park facilities are designed and sited to minimise visual impact and to avoid conflict with other users and damage to the environment.

Actions and Guidelines

- Provide visitor facilities as appropriate in accordance with the Settings for Tourism and Recreation and National Park settings (see Section 8.1.1).
- Ensure that facilities (particularly toilets) on islands are constructed, operated and maintained to the relevant QDoE standards and that the conditions on commercial activities permits include standards for the use of facilities and provisions to limit the cumulative input of the operations to the design capabilities of these facilities.
- Design facilities to be as maintenance free as possible and in accordance with QDoE Site Planning Manual (1991).
- Locate visitor facilities and other works to minimise disturbance to sites.
- Seek the advice of the Beach Protection Authority when proposing works in erosion prone areas as identified in the Beach Protection Buffer Zones: Policy Statement.
- Monitor use of facilities during peak demand to determine the need for additional facilities.
- Negotiate user funded and maintained facilities where possible.

8.5 Private Facilities

Private facilities can be divided into two categories: 'permanent' facilities fixed to and supported by the ground or seabed (eg. resorts, marinas, jetties and or ramps); 'semi-permanent' facilities moored to the ground or seabed and supported by self-buoyancy (eg. pontoons, platforms, moorings and markers).

The installation and operation of any facility within the Marine Parks requires a permit, administered jointly by GBRMPA and QDoE, and installation of structures within the intertidal area also require a Section 86 Approval under the Queensland *Harbours Act* 1955, administered by QDoE.

As a result of increased tourism activities there has been a proliferation of private facilities in the Whitsundays particularly adjacent to resorts. A number of private jetties on the mainland coast are currently unpermitted and will be required to obtain the appropriate approvals. Private facilities, particularly moorings and pontoons, have also been installed at several popular locations, to enhance reef appreciation, guarantee access and eliminate the need to anchor.

While private facilities may assist tourists and help to manage impacts on the environment, they can also damage the environment and affect the character of the landscape, seascape and amenity. Future installation of private facilities will therefore be managed through Settings, permits and Site Plans.

On 16 July 1996, in response to management and public concerns in relation to the impacts of unmanaged growth, the GBRMPA put in place a moratorium on specific permissions applying to moorings. Under the moratorium, existing operations wishing to renew or transfer their permits were exempt, as were new operations wishing to install moorings adjacent to resorts and coastal settlements, or in association with an existing pontoon or other structure (eg. service moorings). The intent of the moratorium was to allow an increase in the number of service moorings, subject to assessment, but only in those locations where development had already occurred.

Other facilities, such as jetties, marinas and pontoons, were not covered by the moratorium; it was recognised that they could be adequately managed through the required EIA and public advertising process.

The Plan will pursue restrictions on all facilities in the Whitsundays, through a combination of Settings, permits and Site Plans, to assist park managers and applicants identify inappropriate facilities, prior to EIA and public advertising.

Actions and Guidelines

- Manage private facilities in accordance with Settings (see Section 8.1), permits and Site Plans.
- Seek the advice of the Beach Protection Authority when proposing works in erosion prone areas as identified in the Beach Protection Buffer Zones: Policy Statement (see Supporting Documents).
- Identify all unpermitted structures within the Marine Parks and require that the appropriate approvals be obtained.
- Ensure that private facilities are designed so as to have minimal scenic and environmental impact.

8.5.1 Island Resorts

The Whitsunday Island resorts are an integral part of the recreational opportunities in the Whitsundays. Providing a range of facilities and activities and cater for high visitor numbers.

Many resorts have leases over National Parks, operating under an agreement with QDoE or the Queensland Department of Natural Resources (QDNR), or are adjacent to National Parks. Resort developments and activities can directly and indirectly affect the natural, cultural and heritage resource values. A number of resorts are permitted to conduct activities within the National Parks, such as guided walks and barbecues, or hold a Marine Parks permit for activities such as beach hire activities, watersports and vessel/dinghy hire.

Actions and Guidelines

- Encourage resorts to become more involved in the maintenance of Park facilities and resources.
- Restore unused lease areas to National Park or place under National Park permits or agreements at expiry of current leases.
- Consider the development of Ranger Service agreements where appropriate between management agencies and resorts.
- Include in all new lease arrangements a clause excluding pets, introduced plants and animals, and other conditions necessary to minimise impacts.
- Enforce the existing lease conditions applying to resorts leases on National Park islands.
- Liaise with QDNR to enforce non-National Park tenure lease conditions.
- Encourage resorts to undertake and improve interpretation.

8.5.2 Pontoons and Platforms

Most pontoons are used in conjunction with site specific tourism operations to accommodate large groups of people offshore. Platforms (eg. helipads, watersport and swim platforms) are smaller than pontoons and are generally used to assist beach hire, helicopter and pontoon operations. Several provide a base for a variety of activities fishing, diving, such as snorkelling, coral-viewing, fish-feeding, reef-walking and scenic flights.

In some situations pontoons and platforms have been shown to provide an environmentally sound and convenient way of providing access to reefal areas for large numbers of visitors. The Plan encourages their use in these situations.

Adverse impacts from pontoons include damage from mooring pins, blocks and anchor chains, shading, effects upon the scenery and amenity, displacement of other users and concentration of use. In extreme cases, a pontoon may alter the type and pattern of use of an area and result in localised displacement and use conflicts.

Actions and Guidelines

- Pontoons will continue to be a desirable facility at Hardy Reef, but are not generally considered appropriate elsewhere in Setting 2.
- Installation and operation of pontoons will continue to subject to rigorous impact assessment and operational standards.
- Investigate opportunities for placement of interpretive signs at pontoons.
- Require developer funded monitoring programs associated with pontoon installation.

8.5.3 Moorings and Markers

Moorings provide greater security for vessels and aircraft than anchors, particularly when the vessel or aircraft is left unattended for long periods of time. The majority of moorings in the Whitsundays are located adjacent to resorts and coastal settlements. Moorings are also used in conjunction with tourist operations, for securing ancillary facilities overnight (eg. semi-submersibles and glass-bottomed boats), and are commonly referred to as service moorings.

In addition, several private moorings have been installed at popular sites in conjunction with smaller, site specific tourism operations, to enhance reef appreciation and access and to eliminate the need to anchor at these sites.

Although moorings reduce physical damage to reefs, they require continual maintenance and can affect the natural scenery of an area. If inappropriately located, moorings can cause displacement of other users.

Actions and Guidelines

- Continue to implement Reef Protection Program (see Appendix 2) and investigate mechanisms to recover costs eg user pays scheme.
- Continue to cap the number of permits to install moorings, except immediately adjacent to and in association with resorts, coastal settlement or pontoon (eg service facilities).
- Review resource and use values at sites with existing private moorings and identify any conflicts and/or impacts that are occurring (eg displacement of other users).
- Investigate the need to remove inappropriate moorings and markers where required.
- Where appropriate, allow the use of markers to delineate specific areas (eg motorised watersports area etc).

8.6 Tourism Operations

Tourism operations provide many visitors with opportunities to participate in activities which they may not otherwise be able to experience.

The conduct of a tourist program in the Marine Parks requires a permit. These permits, covering both State and Commonwealth requirements, allow commercial access in all zones except Scientific Research Zones and Preservation Zones, and other sites subject to management restrictions. Permits are assessed in accordance with the criteria outlined in the relevant regulations.

A Marine Parks permit is issued jointly for the GBRMP and for the State Marine Park. State Marine Park Regulations concerning the management of beach areas between high water mark (HWM) and low water mark (LWM) adjacent to island National Parks are being reviewed.

A user-pays system for commercial operators was introduced by the Commonwealth Government in July 1993, requiring Marine Parks permittees to complete a log book and pay a fee for use of the GBRMP. This 'Environmental Management Charge' (EMC) generated almost \$1.5 million in 1993/94 and in 1994/95. A percentage of the fee is directed towards the costs of research into the reef resources and the effects of tourism, fishing and adjacent land use. The EMC charges will rise in 1997. To date no equivalent fee is charged for recreational (non-commercial) use of the GBRMP.

The number of commercial operators and the conditions under which they are permitted to operate are monitored and controlled to avoid conflict between users and to protect natural and cultural resources.

The past ten years has seen high growth in visitor numbers to the Whitsundays. This growth has been associated with both tourism and increased residential population and has outstripped the ability of management to cope with impacts, including:

- widespread anchor damage;
- disturbance to vulnerable wildlife (dugong, turtle, whales and nesting shorebirds) and beach vegetation; and
- crowding, displacement and loss of social values.

Commercial tourist visitation in 1995/96 totalled 523,921 visitor days. Currently the total capacity permitted each year is almost six million (vessel/aircraft passenger capacity x number per day permitted to visit). The difference between the actual use and permitted capacity (equating to 90%) is the latent capacity, which reflects the presently permitted potential for expansion in the industry.

The absence of a site allocation policy is also a cause for concern given the very limited reef sites available and the high level of demand for mooring sites.

On 16 July 1996, in addition to moorings, GBRMPA put in place a moratorium on specific permissions for tourist program applications. The moratorium did not apply to:

- renewals or transfers of existing permits;
- applications for short-term visitation (up to 42 days use during the twelve months following the grant of permission); or
- applications for use of already permitted moorings, pontoons or other structures.

There has been general community and industry support for the moratorium since July 1996. Given the limited management resources currently available and likely to be available in the foreseeable future, there is a need for the restrictions to remain in place. As such, the intent of the moratorium will be continued through this Plan. Actions will be taken to further standardise and streamline the permits system. Existing permittees numbers will be allowed to grow subject to continued compliance with the Settings.

8.6.1 Site Specific

A number of tourism operations have focussed on only a few sites, to which they make regular visits, and where permitted, have installed moorings and pontoons to enhance reef appreciation, guarantee access and eliminate the need to anchor. Operations permitted to conduct a private facility at a location are required to use only that facility.

Site specific operations carry a significant portion of the visitors and to the island resorts, to key destinations, such as Whitehaven Beach, Blue Pearl Bay, Black Island Reef, Langford Island Reef, Caves Cove, Bait Reef and Hardy Reef.

Existing site specific tourism operations planning to renew or transfer their permits, and new operations planning to conduct tourist programs attached to existing private facilities were exempt under the moratorium. The intent of the moratorium was to allow an increase in the number of operations only at those locations where private facilities had been installed, and only where access to an existing private facility could be guaranteed.

Actions and Guidelines

- Continue to cap site specific permits, except for operations wishing to conduct tourist programs to an approved facility (with the written consent of the facility owner).
- Permit site specific operations to access management facilities in accordance with the Reef Protection Program (see Appendix 2).
- Continue to require existing site specific tourism operations, with a permit to conduct a facility at a location, to use that facility while at that location.
- Allow existing site dedicated operators to grow subject to continued compliance with Settings and, where appropriate, operational facility limits.

8.6.2 Roving

A number of tourism operations have focussed on a wide range of locations to allow flexibility for weather constraints and customer preference or charter. These operations fall into two categories; long and short range. Long range roving operations are usually reef-wide tourism operations with infrequent use of the Whitsundays. Short range roving operators are usually locally based and have higher levels of use.

Historically, short range roving operations have been permitted daily access to the Whitsundays; long range roving operations have been restricted to six weeks access per year. Both categories are currently restricted to two visits to a permitted location in any seven day period. This has proved to be inflexible due to weather constraints and customer preference or charter.

Under the moratorium, existing roving operations wishing to renew or transfer their permits were exempt. New operations wishing to conduct a tourist program for up to 42 days (six weeks) per year were also exempt. It was not the intent of the moratorium to restrict long range roving operations from continuing to gain access to the Whitsundays for up to 42 days per year (nor to restrict transiting). The moratorium did not set a cap on the number of these 42 day permits, given the expected limited demand. The Plan however, will consider applying a booking system to manage access under short term permits.

It was not clear from the moratorium that multiple 42 day permits and 42 day permits for existing tourism operations could not be obtained. The ability for new operations to become site specific for 42 consecutive days was identified by Park managers as inconsistent with the intent of the 42 day permit. The Plan will set limits on use of individual locations by roving operations.

Actions and Guidelines

- Continue to cap the number of permits for roving operations, except for short term access.
- Allow existing roving operations to grow subject to continued compliance with Settings and Site Plans.

- Limit the use of individual locations by roving operations.
- Require roving operations with short term access to adhere to a booking system, where a booking system is in place.
- Continue to restrict or limit access to sensitive sites (eg. sites listed on schedule of excluded areas in current permits).
- Investigate the need to retain the two visits in any seven day period restriction on established roving operations.

8.6.3 Cruise Ships

Under the Zoning Plan, ships are defined as vessels with a gross tonnage in excess of 1500 tonnes, and are confined to the GUA and Shipping Area without a permit. With limited information on the impacts and suitability of ships in the Whitsundays, permits have confined anchored ships to areas adjacent to Cid Harbour, Line Reef and Turtle Bay; the latter has never been used. In some cases, these permits have further restricted ships to three days access per year.

Cruise ships visit the Whitsundays infrequently and, given that their overall length may be up to 300 metres, can cause amenity and displacement problems and environmental impact from anchoring and manoeuvring. Passenger capacity of up to 1,500 people has the potential to significantly impact on the amenity and natural values of an area. Coupled with their ability to be absorbed by existing latent capacity, this has prompted Park managers to require cruise ships to engage the services of other tourist vessels to meet the recreational needs of their passengers.

Under this Plan a ship is defined as a vessel in excess of 50 metres in overall length. The existing policy for their management will continue to apply. A booking system may be required to manage the number and frequency of cruise ship visits to the Planning Area.

A review of shipping is being undertaken in consultation with AMSA and other relevant groups in order to identify more appropriate anchorages for cruise ships.

Actions and Guidelines

- Confine cruise ships to anchoring within the designated cruise ship anchorages (eg. adjacent to Cid Harbour and Line Reef).
- Continue to permit cruise ships to visit the Planning Area for up to three days per year.
- Continue to require cruise ships to engage the services of other tourism operations to meet the recreational needs of their passengers.
- Where required, manage the number and frequency of cruise ships visits to the Planning Area through a booking system.

8.6.4 Commercial Beach & Island Access

Where day visits to island National Parks are conducted as part of a commercial tour, the operator is required to hold a Commercial Activity Permit (CAP), issued by QDoE under the Queensland Nature Conservation Act and subject to conditions and terms agreed by the Chief Executive of QDoE. Currently there are a number of CAPs valid for island-based tourist programs, offering activities such as guided walks, picnics and barbecues as part of a day visit. A number of commercial operators who transfer passengers to some island beaches do not currently hold a CAP.

CAP fees include application and permit fees, and passenger fees paid through a log-book scheme similar to the EMC. Transport services to National Parks operating on a regular schedule, such as water taxis and ferries, do not require a CAP. There is currently no data available on transfers to islands and for recreational use.

The permits system currently in place for the island National Parks does not include the intertidal area. As a consequence this creates problems with managing commercial operations and visitation to these areas. Rationalising this system will provide a more

equitable approach to charging fees and improve management of the natural resources and facilities at popular destinations.

Actions and Guidelines

- Rationalise the CAP system to include both the beaches and the island National Parks to ensure equity, appropriate use and management of sites.
- Require all tourism operations conducting day visits to beaches and island National Parks to obtain a CAP.
- Where required, control the allocation of a CAP through Site Plans.
- Ensure that a CAP includes standards for the use of facilities and provisions to limit the cumulative input of the operations to the design capabilities of these facilities.

8.6.5 Commercial Camping

Commercial camping has been popular for many years in the Whitsundays. Since 1985 it has been restricted to two commercial operators. There are currently no commercial camping permits issued.

In the past, the experience available to private campers has covered the full opportunity spectrum. The use of campsites by commercial operators has focussed on managed campsites with facilities and space for large groups. The current demand for a wider range of commercial camping opportunities (eg small groups at bush campsites), and the response to the Draft Plan, has prompted a reconsideration of the current approach to camper management.

The limited number of sites and environmental constraints require a restriction on the number of permits and the size of groups. Within these constraints it is proposed that additional opportunities for commercial camping will be made available.

Regular scheduled access to a site by small and large groups of people has the potential to increase the physical impacts associated with camping and may place additional pressures on facilities. In addition, impacts on neighbouring campers may also increase where large organised groups are involved (eg continual movement of people, noise, group activities and available space for camping).

Actions and Guidelines

- Allow for a wide range of opportunities for commercial camping operations.
- Require all commercial operators wishing to conduct camping as part of their operations to hold a current Marine Parks permit (if operating in the Marine Parks) and a CAP.
- Commercial camping operators will be granted access to campsites in accordance with the tendering process and booking system outlined in the Camping Policy (see Supporting Document).
- Investigate methods for commercial camping operators to contribute to the management of the campsite and facilities where appropriate.
- Liaise with commercial operators and other interested parties to prepare guidelines and/or Code of Practice for commercial camping operations and large organised camping activities.
- Monitor the impacts of use and rotate or relocate commercial campsites and/or activities as required.

8.7 Site Restrictions

The Zoning Plans, the Plan, codes of conduct and other Government policies all combine to provide broad management intent for the Planning Area.

These tools do not address issues specific to individual sites. Site planning identifies areas that require additional management based on values, existing and potential levels of impact and popularity for a range of uses. Site Plans will outline the conservation and use values specific to each site, list the management issues and concerns and propose management strategies. They will cover islands and marine areas and as such will provide a complementary approach to strategic management in Marine and National Parks.

Implementation of Site Plans will occur through regulation, policy or statutory planning processes. A loose leaf manual will be developed providing a guide to the use of each site (eg management facilities, restrictions on use etc).

Actions and Guidelines

- Develop and implement Site Plans for high priority areas within the Planning Area (see Supporting Document).
- Develop a Marine Parks manual that includes Site Plans.

9. FISHING, COLLECTING & MARICULTURE

Desired Outcomes:

- *To ensure that marine resource harvesting is ecologically sustainable.*
- *To minimise the impact of marine resource harvesting on natural, cultural and heritage values.*
- *To minimise the conflict between marine resource harvesting and other park uses.*

Marine resource harvesting activities currently undertaken within the Planning Area include line fishing, game-fishing, spearfishing, trawling, netting, crabbing and shell, coral, aquarium fish and oyster collecting.

The areas available for fishing in the Planning Area are specified in the Zoning Plans. The collecting fisheries (coral, shell, trochus, beche-de-mer and aquarium fish collecting) can only be undertaken in GUA & GUB with a Marine Parks permit. Under the offshore constitutional settlement between the Commonwealth and Queensland governments fisheries in the Marine Parks are managed by Queensland government agencies (QFMA & QDPI).

9.1 Commercial Fishing

More than 45 commercial fishers operate in the Planning Area (this excludes trawl operators from other areas whose numbers fluctuate seasonally). Inshore gill-netting occurs along the coast from Rocky Point (Repulse Bay) to Gloucester Island and around some islands. The principal catch is salmon, barramundi and mullet and, in season, grey and spotted mackerel and estuarine mud crabs. Mackerel trolling occurs off islands, headlands and passages; reef line fishing off many islands. Beam trawling for prawns is undertaken in inshore areas and otter trawling for banana prawns (daytime seasonal) and tiger prawns (night time seasonal) in Repulse Bay. Tiger prawns are also caught in Whitsunday Passage outside the GUB transect, Cumberland Channel and inshore areas from Pioneer Point to Gloucester Island. Bait netting for garfish occurs in the Lindeman Group, parts of the Whitsunday Group, and the vicinity of Cid, Double Cone, Rattray, Saddleback, Gloucester and Grassy Islands, Dingo Beach, and Windy Bay on Haslewood Island.

Concerns about commercial fishing include: the need for adequate industry consultation in all stages of marine park planning and implementation; the need to increase community and park management knowledge of the fishing industry and for liaison about commercial fishing effects; potential environmental impacts (resource depletion, wasted by-catch, damage to benthos, incidental catch of turtle and dugong), and the need for better knowledge of the resource and its harvesting sustainability.

The QFMA is in the process of preparing a number of management plans for commercial fisheries, including reef line fishing, and the trawl and gill net fisheries (QFMA 1996), with recommendations for sustainable management of the industries.

Drowning of dugong in gill-nets along the Queensland coast is one activity that has contributed significantly to a marked decline in numbers. There are considerable concerns for the future of the species. Management agencies are undertaking an urgent review of the gill-net fishery which may change netting practices.

The fitting of effective bycatch reduction devices (BRDs) on all trawlers operating within the Marine Parks is expected to be obligatory by the year 2000 and is supported by GBRMPA and QDoE.

Actions and Guidelines

- Implement recommendations and strategies arising from the results of the GBRMPA 'Effects of Fishing' research program when completed.

- Consider in the next review of Zoning Plans, possible re-zoning of seagrass areas in the GUA.
- Maintain support for MACs and ZACs.
- Support the implementation of gill-netting restrictions in key dugong habitats.
- Increase QDoE and GBRMPA understanding of, and liaison with, the Whitsunday commercial fishing industry.

9.2 Recreational Fishing, Charter Fishing and Spearfishing

Recreational fishing is a popular activity in the Planning Area and can be conducted in GUA, GUB and MNPA. Management of recreational fishing and fishing charters in the Planning Area are based on provisions of the Zoning Plans, with some additional restrictions on the activities of commercial tourist fishing charters. Where necessary, Site Plans may place additional restrictions on recreational and commercial fishing activities at specific sites (eg. Langford Island Reef).

Marine Park zoning prohibits spearfishing in all zones except GUA and GUB. Queensland Government fisheries legislation also prohibits spearfishing in several areas in the Planning Area including the eastern and southern sides of Hook Island.

Actions and Guidelines

- Increase QDoE and GBRMPA liaison with recreational fishers.
- Preclude commercial fishing and dedicated fishing charters from the MNPA in the Planning Area.
- Apply appropriate restrictions on fishing activities through Site Plans.
- Investigate the need for additional MNPB in the Whitsundays.

9.3 Aquarium Fish Collecting

Under the current Zoning Plans recreational collectors can take no more than five animals of any one species per month; specimens can not be sold. Numbers greater than this, or collecting animals require a Marine Parks permit and an authority from QFMA.

There are currently 17 Marine Parks permits issued for the commercial collection of aquarium fish in total, with five collectors based in the Airlie Beach and Mackay areas. The permits, are non-transferable, allow collecting to occur over a broad area and do not specify locations. However, there is little information available on collecting locations and quantities taken within the Planning Area. Marine Parks permits have restricted collecting in the Whitsundays and a standard permit condition requires that collection be undertaken away from recreational and tourism activities.

The aquarium fish industry has the capacity to over exploit the resource at a local level, particularly the inshore endemic species. Although a wide variety of species are harvested, uncommon species are more valued and are therefore targeted by collectors.

QDPI, who formerly managed the collecting fisheries, has drafted a management plan for aquarium fish collecting, in consultation with fisheries and marine park management agencies. This is still under review. Under the management of QFMA, no new authorities for aquarium fish collecting are being issued and current authorities are non-transferable.

Actions and Guidelines

- Consistent with the QFMA management strategy, additional Marine Parks permits for aquarium fish collecting will not be granted.
- Liaise with QFMA and QDPI on development and implementation of the management plan for the aquarium fish industry.
- Continue to require permitted aquarium fish collectors to collect away from popular tourist sites in the Planning Area.

9.4 Shell Collecting

Shell collecting is the taking of shells, dead or alive. Under the Zoning Plans, limited collecting (taking of up to 5 species in a 28 day period) is allowed in GUA and GUB. The collection of *tridacnid* clams, helmet shells (*Cassia cornuta*), triton shells (*Charonia tritonis*), and shells with eggs is prohibited in the GBRMP. A permit is required under the Zoning Plans for the taking of more than five individuals of other species ('commercial collecting'). All commercial collectors holding permits must complete a collection return form annually, detailing numbers of species taken, collecting dates and localities. Collectors also require an 'authority to take fish' from the QFMA for the commercial collection of shells. There are currently only two commercial shell collectors in the GBRMPA authorised by the QFMA. There is no evidence of the activity within the Planning Area.

Shell collecting is seen by many people as incompatible with other tourist and recreational use and has the capacity to degrade the reef communities and structure. In the Whitsundays, the Dingo Beach reef is a favoured site for recreational shell collecting. A 1992 survey indicated that the Dingo Beach reef had exceptional natural values (Van Woesik and De Vantier, 1992). Follow up surveys in 1994 identified a decrease in coral cover at Pelican Island which may be caused by siltation (De Vantier *et al* 1996). There is concern amongst local residents that the Dingo Beach reef area has been adversely affected by shell and coral collecting through trampling, non-replacement of overturned rocks and possible over collecting. Barnett (1988) notes that habitat destruction by tourists may be much, to blame for shell depletion.

Actions and Guidelines

- Prohibit commercial shell collecting within the Planning Area.
- Ensure limited shell collecting is undertaken away from areas visited regularly by tourists.
- Increase public awareness of the impacts of shell collecting.

9.5 Coral Collecting

Coral collecting requires a Marine Park permit and authority from QFMA. These allow limited collection of coral within defined coral lease areas. There are currently four commercial coral collecting licence areas in the Planning Area: Macona Inlet; Line Reef; Grimston Point; and Dumbell Island. Corals are collected for the aquarium trade, the ornament industry, and to maintain the Hook Island underwater observatory.

Fringing reefs are a limited resource throughout the GBR and especially in the Planning Area. This relatively scarce resource has important conservation values and, because of reef accessibility, has seen increasing pressure over recent years from anchoring, diving, collecting, increased sediment loads and nutrients. It is important that the fringing reefs are protected from over-collecting and illegal collecting activities.

Actions and Guidelines

- Restrict the issue of further coral collecting authorisations within the Planning Area.
- Negotiate with QFMA and coral collectors on future relocation of coral leases to areas outside the Planning Area.
- Increase public awareness of the impacts of coral collecting.

9.6 Sand and Rubble Collecting

Collection of coral sand or coral rubble within the boundary of the GBRMP is prohibited under the Commonwealth Great Barrier Reef Marine Park Act, and in all zones other than GUA and GUB (subject to permit approval), in State Marine Parks. Approvals under the Queensland Harbours Act and Queensland Beach Protection Act may also be required.

Actions and Guidelines

- Maintain present prohibitions within the GBRMP.

- Allow essential beach works to be undertaken where necessary adjacent to resorts. Sediment will not be taken from beaches within the Planning Area other than the beach where works are being undertaken. Sediment will only be imported from outside the Planning Area where it can be demonstrated that environmental impacts to the Planning Area are acceptable. Monitoring of beach profiles and sediment movement will be a condition of any beach works.
- Prohibit any removal of sand and rubble within GUA and GUB in the State Marine Park except where appropriate for beach works as detailed above.

9.7 Mariculture

Mariculture, such as giant clam or pearl oyster culture, oyster grow out, prawn farming and fish farming, requires authorities from QFMA or QDPI, and a Marine Park permit. Under the Zoning Plans mariculture (the 'farming of marine resources') and operation of associated facilities may only be permitted in GUA and GUB. Currently there are no Marine Parks permits for mariculture within the Planning Area. The culture of clams and pearl generally require warmer water than in the Whitsundays. Cage culture of fish such as barramundi, and holding tanks for the live reef fish industry are other potential mariculture activities.

Oyster gathering in the Planning Area only occurs on two oyster banks, established in the mid 1960s, at Anderson's Inlet (Woodcutters Bay) and Gulnare Inlet. Oyster banks require a licence from QDPI and a Marine Parks permit where structures are installed as part of a mariculture operation. Oyster banks restrict public access, unless an appropriate easement is incorporated to allow foreshore access by the public. The installation of structures displaces other users and may affect scenic values which is incompatible with the primary tourism emphasis in the Planning Area.

Mariculture operations, may require exclusive use of large area over a long term. Where artificial feeding is required, such as in fish culture, the activity may also affect water quality and amenity and may conflict with other use of the area.

Actions and Guidelines

- Prohibit mariculture, except existing commercial oyster banks without structures, within the Planning Area.

9.8 Beche-de-mer and Trochus

At present the collection of beche-de-mer (*Holothuria*) is by hand only and requires an authority from QFMA, and a Marine Park permit. There are currently 18 beche-de-mer authorities to operate within 'all tidal waters' of the GBRMP and Torres Strait. There are currently five authorised trochus collectors on the east coast. There is little data available on collecting within the Planning Area.

New technology for drying beche-de-mer could have a major impact on the resource both in amounts taken and the indiscriminate collection of species.

The status of the population of Holothurians on the east coast and Torres Strait is poorly known. Commercial beche-de-mer and trochus harvesting is likely to be in conflict with the predominant tourism and recreational focus of the Planning Area.

Actions and Guidelines

- Prohibit harvesting of beche-de-mer and trochus within the Planning Area.

9.9 Traditional Hunting and Collecting

Hunting of green turtle and dugong are important traditional practices of Aboriginal and Torres Strait Islander people in northern Australia.

A Marine Park permit is required for traditional hunting and collecting for all species, but the traditional hunting of the endangered loggerhead turtle is not permitted. A dugong conservation strategy released by GBRMPA in 1996 highlights the declining numbers of dugong in recent years and the threat of extinction; strategies to minimise traditional hunting are in place. The Giru Dala community has voluntarily agreed not to take dugong and consequently no permits are issued in the Planning Area.

Actions and Guidelines

- See sections 6.4.2 on turtles and 6.4.3 on dugong.
- Increase monitoring of traditional hunting permit returns.

10. SHIPPING

Desired Outcomes:

- *To ensure that any transit through the Planning Area is conducted safely.*
- *To minimise the impact of shipping on natural, cultural and heritage values.*
- *To enhance shipping crew's understanding of the values of the GBRWHA and the need for appropriate waste management.*

The Whitsundays has a long history of ship use, particularly by cargo vessels in transit between Townsville, Hay Point, Mackay ports and harbours.

Under the Zoning Plans a ship may only be navigated and operated in GUA and in shipping areas.

Records indicate that, during the 1994/95 financial year, 1,800 transits by ships were made through the Planning Area. The majority of these followed the shipping route outside the islands, passing between Hook Island and Hardy Reef and avoiding the Whitsunday Passage.

Major concerns regarding shipping in the Whitsundays, raised in the submissions, relate to the risk of grounding and collision with other vessels, and the potential for pollution (chemical, garbage, sewage and oil spills. Section 6.8). Oil spills in the GBRMP are managed through REEFPLAN (Marine Pollution Contingency Plan). Records of shipping incidents in the Whitsundays include a grounding on Dent Island Reef and several minor oil spills in waters adjacent to the islands.

The International Maritime Organisation (IMO) is concerned with the safety of shipping and the protection of the marine environment. In 1990 the IMO's Safety Committee designated the GBR as the world's first 'Particularly Sensitive Sea Area'. Among the implications from such a designation are the need for certain vessels to carry a pilot as a means of reducing the risk of grounding or collision in certain sections of the GBRMP. It is an offence under the Commonwealth Great Barrier Reef Marine Park Act to navigate a regulated ship without a pilot in the compulsory pilotage area. Although the Whitsunday Passage Shipping Area is not a compulsory pilotage area, AMSA strongly recommends the use of licensed pilots by masters unfamiliar with the Inner Route (Qld Transport and AMSA 1996).

Actions and Guidelines:

- Implement recommendations from a comparative risk and cost/benefit analysis of shipping using an alternative route to the Whitsunday Passage Shipping Area (refer to Zoning Plans) in consultation with the AMSA, QDoT, the shipping industry and other relevant authorities.
- Support the education of commercial shipping companies in the appropriate management of sewage discharge, deck spillage and garbage disposal.
- Support adequate training for marine park managers in implementing the oil spill contingency plan, REEFPLAN and any other relevant QDoE contingency plans.

11. COASTAL DEVELOPMENT

Desired Outcomes:

- *To site coastal development focussing access to the Marine Park and island National Parks in areas managed for high levels of use.*
- *To minimise the impacts of adjacent land uses on the scenic, natural and cultural values of the Marine Park and island National Parks.*

The dominant land uses adjacent to the Planning Area include, urban development, tourist facilities, marinas and jetties, agriculture and conservation reserves. Only the major developments of Airlie Beach, Shute Harbour and the island resorts show significant alterations to the natural landscape and seascape.

It is anticipated that the number of visitors and residents will increase substantially creating additional pressure for urban and tourist developments. Appropriate siting and design of any coastal development will be critical in maintaining the area's outstanding scenic and natural values.

Urban and resort development outside current nodes, both on undeveloped islands and along the mainland coastline, would change the pattern of access to the islands and Marine Park and impact on the natural resources through clearing of vegetation, erosion and increased sedimentation, sewage and stormwater discharge and disturbance to wildlife habitat.

Existing developments and other land uses such as agriculture may impact on the adjacent waters through inappropriate land management. Agricultural runoff and sewage and stormwater discharge will impact the water quality of the Marine Parks. This will influence the species composition and development of reef communities and other critical habitats.

Marinas and jetties associated with existing urban and tourist developments provide safe and convenient access to and from major access points on the coast and islands. They also have the potential to impact marine systems through physical impacts of construction and operation (eg disturbance to the seabed, increased sedimentation, fuel and oil spills, discharge of antifouling paints, changing the patterns of sediment transportation, shading the seabed and benthic communities and providing easy access for fishing activities).

Close liaison between various authorities and leaseholders is essential for good regional planning. The Integrated Catchment Management Strategy and the Coastal Protection Strategy of the Queensland Government are mechanisms designed to assist with presenting a unified approach to coastal management. The relationship will be formalised through a regional coastal planning process to be conducted under the Queensland Coastal Protection and Management Act which will involve the appointment of a Regional Consultative Group to advise on planning.

Actions and Guidelines

- Continue to work closely with the QDNR to ensure that lease conditions for island resorts aimed at minimising any adverse environmental impacts are observed.
- Continue to work with other government agencies as appropriate to coordinate planning and management of areas adjacent to and potentially affecting the Parks.
- Continue to provide comment on proposed developments by authorities, resorts, or other landowners which may have an effect on the Planning Area.
- Continue involvement with the Integrated Catchment Management Strategy and the Coastal Protection Strategy and Landcare, in particular through the regional coastal planning process.
- Require permittee-funded monitoring of environmental impacts for all marinas and jetties.

- Require any new marinas or jetties to utilise best environmental practices for construction and operation.
- For the foreseeable future Shute Harbour and Airlie Beach should remain the only major mainland access points to the Planning Area.

12. INFORMATION, EDUCATION AND PARTICIPATION

Desired Outcomes:

- To increase the knowledge, understanding and appreciation of the natural features and significance of World Heritage values of the Planning Area.
- To increase the knowledge, understanding and appreciation of cultural and heritage values.
- To increase the awareness of the potential impacts that recreation and commercial activities may have on the natural, cultural and heritage values and encourage appropriate behaviour.
- To increase commercial operators and public awareness of the conservation needs of rare and threatened species and an understanding of management strategies.
- To increase the awareness of other management agencies, landholders and local councils of the potential impact of activities on the natural, cultural and heritage values.
- To ensure commercial operators provide appropriate and accurate information to visitors.
- To increase awareness of other users needs and preferred experiences to minimise conflicts between users.

12.1 Community Information and Education

The outstanding natural beauty of the Whitsundays attracts large numbers of visitors seeking diverse recreation activities and experiences. Activities range from organised resort holidays to remote experiences undertaken either privately or as part of a commercial tour.

Visitor experiences are enhanced by educational and interpretive information. Community understanding is also fosters support for conservation and assists in the effective management and protection of natural, cultural and heritage resources. The Whitsunday Information Centre at Airlie Beach is strategically located to introduce and orientate visitors to the Whitsunday Marine and National Parks and to provide appropriate information.

There is a need to encourage commercial tour operators, bareboat charter managers and resorts owners and staff to provide accurate information to visitors and to develop an awareness of the potential impact of human activities on reefs and islands. Liaison with other management agencies, landholders, councils, resorts and commercial operators is also important.

GBRMPA has prepared a Great Barrier Reef Public Education Strategy to identify interpretive messages for the entire GBRMP. The Public Education Strategy will be implemented through Regional Public Education Plans (Supporting Document) prepared by QDoE which identifies regional requirements for displays, printed material, signs, community events and programs, commercial operator programs and workshops and other needs.

Actions and Guidelines

- Prepare displays, printed material, signs, commercial operator programs and workshops and other interpretive material in accordance with the Public Education Strategy (Current and proposed projects listed in Table 2).
- Review the Regional Public Education Plan annually (Supporting Document).
- Encourage resort funding and development of interpretive material such as brochures and walking tracks etc.
- Maintain relevant interpretive programs and displays for District and reef-wide issues.
- Provide continued support to the Whitsunday Volunteer Program through coordination of District and volunteer resources.
- Provide staff training in interpretation and education.

Table 2: Current and proposed education projects

Current and proposed education projects	Ref. (Sections)
Undertake education to increase public and commercial awareness of correct anchoring and diving practises and increase public understanding of the potential damage from their activities.	6.2
Encourage the tourist industry to adopt the GBRMP Best Environmental Practices while undertaking activities in the Marine Parks and island National Parks (eg waste disposal, anchoring, fish feeding, whale watching, diving, snorkelling, visiting islands, walking, reef walking, turtle watching, camping). Update relevant interpretive materials and guidelines.	6.2, 6.8.4, 8.2.4, 8.2.5, 8.2.6, 8.2.7, 8.3.1, 8.3.2, 8.3.5
Promote the value of wetlands.	6.3
Continue to provide visitors with information on marine animals (including turtles, dugong, crocodiles) and design interpretive material to explain threats to marine life and appropriate visitor behaviour.	6.4, 6.4.1, 6.4.2, 6.4.3
Continue public education and interpretation on dugong conservation.	6.4.3
Maintain a seasonal awareness program in conjunction with whale watching in the Whitsundays.	6.4.4
Increase public awareness about rare and threatened plant species and their specific management requirements.	6.5
Update and maintain interpretive material and public awareness programs about prescribed burning plans in the National parks.	6.5
Increase awareness of resort staff and visitors about the adverse affects of introduced plants on natural values.	6.5
Develop interpretive material to explain conservation needs of rare and threatened animal species and threats caused by the introduction of native animals and by human disturbance.	6.6
Develop interpretive strategies to explain the conservation significance and threats to beach stone-curlew, pied imperial pigeons and raptors, and the reason for seasonal closures.	6.6.2
Reinforce the dangers of domestic pets to native wildlife through education, interpretation and cooperation with the public and resort operators.	6.6.3
Incorporate pollution messages into interpretive materials including: minimisation of bilge-sourced oil, the impacts of sewage pollution on marine environments, the use of pollution-free detergents, and the need for correct disposal of garbage.	6.8.1, 6.8.2, 6.8.3, 6.8.4
Encourage public reporting of oil spills and sightings of wildlife affected by oil spills and promote public involvement in the treatment of oil spill victims.	6.8.1
Assist in the development of interpretive programs such as Landcare to inform landowners about the effects of run-off into the GBRMP and the need for careful land management.	6.8.5
Encourage and involve community groups in upgrading cultural and historic resource information.	7.1, 7.2
Determine interpretive methods to promote and develop cultural understanding and to assist in management and preservation of relics .	7.1, 7.2
Upgrade the Whitsunday Information Centre to include information about cultural heritage values .	7.1, 7.2
Where required, develop and maintain site interpretation at cultural and historical sites (eg Nara Inlet rock art site).	7.1, 7.2
Develop interpretive material for cultural and historical values of the Planning Area eg Cid Harbour.	7.1, 7.2

Encourage an awareness of the potential impacts of diving and snorkelling through interpretive materials and industry training.	8.2.4
Encourage commercial operators to develop a code of practice for commercial whale watching.	8.2.6
Develop training and interpretive materials specifically for bareboat operators and their clients.	8.2.9
Maintain interpretive materials for campers that promote awareness of campsites and minimal impact camping practices.	8.3.2
Continue to develop and upgrade brochures and other interpretive materials (including signage) on available walking tracks.	8.3.5
Maintain, develop and distribute interpretive materials to explain the mooring and marker buoy strategies.	8.4.1
Encourage resorts to undertake and improve interpretation.	8.5.1
Investigate opportunities for placement of interpretive signs at pontoons.	8.5.2
Liaise with commercial operators and other interested parties to prepare guidelines and/or Codes of Practice for commercial camping operations and large organised camping activities.	8.5.5
Increase QDoE and GBRMPA understanding of, and liaison with, the commercial fishing industry.	9.1
Increase QDoE and GBRMPA liaison with the Whitsunday recreational fishers.	9.2
Increase public awareness of the impacts of shell collecting and coral collecting.	9.4, 9.5
Support the education of commercial shipping companies in the appropriate management of sewage discharge, deck spillage and garbage disposal.	10
Continue involvement with the Integrated Catchment Management Strategy and the Coastal Protection Strategy and Landcare, in particular through the regional coastal planning process.	11
Continue the volunteer program established at the QDoE Whitsunday Visitor Information Centre at Airlie Beach.	12.2
Continue to liaise with landowners, councils, resort managers and staff, commercial operators, and other appropriate authorities about park management issues, particularly issues related to recreation, fire management and conservation.	12.3
Maintain and upgrade boating safety interpretive material available at the Whitsunday Information Centre.	13.4

12.2 Volunteer Program

A volunteer program has been established at QDoE Airlie Beach office and volunteers assist with a variety of management activities such as provision of visitor information, seabird monitoring, campground maintenance, revegetation projects, beach clean-ups, track and facility construction and maintenance and weed control. The seabird monitoring project is aided by a grant under the Coastcare Program, a cooperative Commonwealth, State and Local Government program which encourages community groups to become involved in coastal projects.

Volunteer groups can provide valuable assistance in managing the Planning Area. Involvement of community groups in projects also helps to foster community awareness and understanding about management of the area.

OUCH is a voluntary organisation that has participated in the surveys of fringing reefs for the moorings and markers program. Mapping and species composition information collected has been used in the development of Site Plans.

It is important that projects for volunteer groups are planned and supervised to ensure that works carried out are consistent with the management objectives of the Parks and are undertaken in an appropriate manner.

Actions and Guidelines

- Continue the volunteer program established at the QDoE Whitsunday Visitor Information Centre at Airlie Beach.
- Ensure that volunteers are supervised at all times and that there is adequate insurance coverage of volunteer workers.
- Ensure that volunteers are adequately trained.

12.3 Community Liaison

The establishment of the Whitsunday Coastal Advisory Committee (WCAC) by GBRMPA and QDoE in 1995 provides a framework for representatives of local government and stakeholder groups to have input into planning and management of the Marine Parks. The WCAC has had an active role in the management planning process and will continue to play a consultative role in coastal planning.

Actions and Guidelines

- Maintain support for the WCAC.
- Encourage community involvement in management of the Planning Area.
- Continue to liaise with landowners, councils, resort managers and other appropriate authorities about park management issues, particularly issues related to recreation, fire management and conservation.

13. MANAGING AUTHORISED USES

Desired Outcomes:

- To permit only public authority utilities and services considered essential to the public.
- To minimise the impact of utilities and services on the natural, cultural and heritage values of the Planning Area.
- To minimise the impact of defence force activities on environmental and cultural values and visitor enjoyment of the Planning Area.
- To minimise the visual impact of plaques and memorials on the natural, cultural and heritage values in the Planning Area.

13.1 Utilities and Services

A number of services and utilities are provided in the Planning Area by public authorities. These include power lines; telephone cables; communication towers; survey points; quarries; lighthouses; helicopter landing pads; radio repeater stations; and navigation beacons and markers. These are appropriate only where they do not have a significant impact on scenic, natural, cultural and heritage values and do not conflict with the management objectives for the Planning Area.

Actions and Guidelines

- Assess applications for utilities and services on an individual basis. Only those considered essential for public well being which do not conflict with park objectives will be permitted.
- Ensure that design and siting of new services and utilities do not intrude upon or damage scenic, natural, cultural and heritage values.
- Require all utilities located within National Parks to have a permit and Deed of Agreement which includes a negotiated rent or service from the permittee.
- Ensure that utilities and services are designed to be resistant to vandalism and to require minimum maintenance. Any clearing for utilities and services will be defined and supervised by QDoE.
- Where appropriate, utilities and services will be shared and clustered.

13.2 Defence Forces

Under the Zoning Plans defence operations may be carried out after notification to, and subject to reasonable directions by, GBRMPA and QDoE. There are no designated 'Defence Areas' in the Planning Area. Defence forces have equipment and personnel that may assist in management activities within the Parks, these joint management operations provide training for defence force personnel also.

Defence activities have the potential to impact on wildlife such as seabird colonies, whales, turtles and dugong.

Actions and Guidelines

- Liaise with the defence forces to ensure only low impact defence force training exercises in the Planning Area.
- Utilise defence force training to facilitate maintenance and construction of park facilities.

13.3 Plaques and Memorials

Commemorative plaques and memorials can contribute to the understanding of historic events or people closely associated with the history of an area. Requests to erect plaques and memorials must be carefully considered as these structures are permanent. If inappropriately sited or poorly designed can be intrusive or destructive to the natural or cultural environment.

Actions and Guidelines

- Assess applications for plaques and memorials on an individual basis and only permit those that commemorate events or people of outstanding significance to the area. Approval will require written permission from the Regional Director of QDoE.
- Ensure that the design and siting of plaques and memorials does not intrude upon or damage the natural, cultural and heritage values.
- Require plaque and memorial designs to be resistant to vandalism and to require minimal maintenance.
- Ensure that existing and new plaques and memorials are maintained.

13.4 Search and Rescue

Under the Zoning Plans, any area of a Marine Park may be entered or used in special circumstances for purposes such as: saving human life or avoiding the risk of injury to a human being; locating or securing the safety of an aircraft, vessel or structure which is, or may be, endangered by the stress of weather or by navigational or operational hazards; and dealing with an emergency involving a serious threat to the environment.

Actions and Guidelines

- Assist with search and rescue as appropriate.
- Encourage boat users to lodge trip reports with the Coast Guard when boating in the Planning Area.
- Maintain and upgrade boating safety interpretive material available from the Whitsunday Information Centre.

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APPENDIX 1: Legislative Obligations

Legislation and agreements specifically relevant to the Planning Area are outlined below.

Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984

This Act protects sites which have been through a formal process of nomination and assessment.

Commonwealth Australian Heritage Commission Act 1975

This Act obliges the Commonwealth Government to avoid approval of anything in the Great Barrier Reef Marine Park which would adversely affect the area of the Great Barrier Reef listed on the Register of the National Estate unless satisfied that there are no prudent and feasible alternatives.

Commonwealth Civil Aviation Act 1977

Commonwealth Endangered Species Protection Act 1994

Commonwealth Environment Protection (Sea Dumping) Act 1981

This Act regulates the disposal at sea of dredge spoil and land sourced waste.

Commonwealth Fisheries Act 1994

This Act provides for the management, use, development and protection of fisheries resources and fish habitats and the management of aquaculture activities, and for related purposes.

Commonwealth Great Barrier Reef Marine Park Act 1975

The framework for managing the marine area is provided by the Zoning Plan which sets the following objectives:

General Use A Zone To provide opportunities for reasonable general-use consistent with the conservation of the Great Barrier Reef Marine Park.

General Use B Zone To provide for the conservation of the Great Barrier Reef Marine Park while providing opportunities for reasonable general-use in areas that are free from trawling and generally free from shipping.

Marine National Park A Zone To provide for the protection of areas of the Marine Park while allowing opportunities for their appreciation and enjoyment by the public, including the limited removal of natural resources.

Marine National Park B Zone To provide for the protection of areas of the Great Barrier Reef Marine Park while allowing opportunities for their appreciation and enjoyment by the public, free from activities that remove natural resources.

Preservation Zone To provide for the preservation of areas of the Great Barrier Reef Marine Park in their natural state undisturbed by human activities.

The Zoning Plan allows some activities to occur 'as of right' while other activities require a Marine Parks permit. This Plan will generally focus on those activities requiring a permit.

Commonwealth Lighthouse Act 1911

Eshelby Island, the south end of Dent Island and a portion of Hook Island are Commonwealth Lighthouse Reserves. The navigation aids require regular maintenance by the Commonwealth Department of Transport. The Zoning Plan provides for access for this maintenance subject to notification of the GBRMPA or its delegate.

Commonwealth Protection of the Sea (Prevention of Pollution from Ships) Act 1983

Implements the MARPOL Convention which seeks to regulate the discharge from vessels of oil, noxious liquids, harmful packaged substances, sewage and garbage under five annexes. The Act implements all Annexes except that relating to sewage which is not yet ratified.

Commonwealth Whale Protection Act 1980

This Act prohibits the killing, injuring, taking or interfering with any cetacean (whale, dolphin or porpoise) in Commonwealth waters without a permit. It also prohibits such actions by Australian citizens and Australian registered vessels anywhere in the world.

Commonwealth World Heritage Properties Conservation Act 1983

The Great Barrier Reef Region was inscribed on the World Heritage list in 1981, placing an obligation on managers to adopt policies and undertake specific actions to protect, conserve and present to the public areas of natural and cultural heritage. The Convention is enacted in Australia by the Commonwealth World Heritage Properties Conservation Act. Regulations under the Act do not apply to the Great Barrier Reef World Heritage Area.

Great Barrier Reef Marine Park Regulations 1983

These Regulations specify that when the Authority considers an application for a permit in the Marine Park the Authority shall have regard to:

- (a) the objectives of the zone to be used or entered;
- (b) the orderly and proper management of the zone to be used or entered;
- (c) the conservation of the natural resources of the Marine Park;
- (d) the existing use and amenity and the future or desirable use and amenity, of the area and of adjacent areas;
- (e) the size, extent and location of any proposed use in relation to any nearby use;
- (f) the likely effects of any proposed use on adjoining and adjacent areas and any possible effects of the proposed use or entry on the environment;
- (g) the proposed means of access to and egress from any use and the adequacy of provisions for aircraft or vessel mooring, landing, parking, loading and unloading;
- (h) where the purpose in respect of which the relevant permission is required is research in a Scientific Research Zone -
 - the environmental impact of the research;
 - the need for the long-term conservation of the Great Barrier Reef; and
 - the needs of other researchers; and
- (i) where the purpose in respect of which the relevant permission is required is traditional fishing or traditional hunting -
 - the need for conservation of endangered species;
 - the means to be employed in traditional fishing or traditional hunting, as the case may be;
 - in the case of traditional fishing, the number of fish, crustaceans, echinoderms or molluscs to be taken; and
 - in the case of traditional hunting, the number of animals, other than fish, crustaceans, echinoderms and molluscs, to be taken.
 - the needs of other researchers; and

Queensland Beach Protection Act 1968

This Act provides controls for coastal land use and development.

Queensland Coastal Protection and Management Act 1995

Queensland Cultural Record (Landscape Queensland and Queensland Estate) Act 1987

This Act gives legislative protection to any item of the Queensland Estate and provides protection for all sites in the state, whether they have been recorded or not. The cultural resources of Queensland are protected by both State and Federal legislation.

Queensland Environmental Protection Act 1994

Provides for protection of the Queensland environment by management of contaminants (emissions - gases, liquids and solids). Incorporates the provisions of the former Clear Air Act and Clean Waters Act.

Queensland Fauna Conservation Act 1974 and Fauna Conservation Regulations 1989

This legislation reinforces the mandate of the Queensland National Parks and Wildlife Service to conserve the fauna of the State and extends this mandate to non-reserved areas.

Queensland Harbours Act 1955

This Act provides for construction of works below high water mark, reclamations, and management of land below high water mark.

Queensland Marine Parks Act 1982, Marine Park Regulations and the Townsville/Whitsunday Marine Park Zoning Plan

The Marine Parks Act specifies that in the preparation of a management plan the following objectives should be met:

- (a) the encouragement and regulation of the use and enjoyment of the Marine Park area by the public;
- (b) the protection and conservation within the Marine Park zone or designated area of objects and sites of significance and marine products.

Queensland National Parks and Wildlife Act 1982 and National Park Regulations 1987

This Act specifies that the cardinal principal of management of a National Park shall be the permanent preservation, to the greatest possible extent, of the natural condition.

Queensland Native Plants Protection Act 1930

This legislation gives the Queensland National Parks and Wildlife Service the mandate to conserve a list of protected flora throughout the State.

Queensland Nature Conservation Act 1992

Under Section 17(1) of the Queensland Nature Conservation Act 1992 National Parks are to be managed to:

- (a) provide for the permanent preservation of the area's natural condition to the greatest possible extent; and
- (b) protect and present the area's cultural and natural resources and their values; and
- (c) ensure that the only use of the area is nature based and ecologically sustainable.

Queensland Transport Operations (Marine Pollution) Act 1995

This Act provides control provisions aimed at minimising ship-sourced deliberate, negligent and accidental pollution of the marine and coastal environment. It gives control to pollution control regulations of the MARPOL Convention.

APPENDIX 2: Reef Protection Program

1. Reef Protection Markers

- white pyramid-shaped buoys installed to delineate the seaward boundary of 'no anchoring areas', usually defining the seaward edge of the fringing reef;
- must not be used as vessel moorings;
- entry into a 'no anchoring area' is only permitted when accessing a mooring or when accessing the beach directly in a manner which does not cause any reef damage (eg. by tender or small craft only).

2. Reef Appreciation Moorings

- agency installed and maintained;
- for public use, unless otherwise stated.

Tender Moorings

- installed to provide small, shallow drafted vessels access into more shallow fringing reef areas;
- located within the no anchoring area as described by reef protection markers;
- for vessel up to six (6) metres in overall length;
- for use at wind speeds up to 24 knots;
- identified by a blue buoy displaying a brown and white Marine Parks sticker and the letter 'T'.

A Class Moorings

- installed to provide small to medium sized vessels access close to reef systems;
- usually located outside the no anchoring area;
- for vessel up to twelve (12) metres in overall length;
- for use at wind speeds up to 24 knots;
- identified by a blue buoy displaying a blue and white Marine Parks sticker and the letter 'A'.

B Class Moorings

- installed to provide large vessels access to bays where anchoring may not be appropriate (eg. the bays may be relatively deep or have bommie field scattered beyond the main fringing reef system);
- usually located outside the no anchoring area;
- for vessel up to twenty (20) metres in overall length;
- for use at wind speeds up to 24 knots;
- identified by a blue buoy displaying an orange and white Marine Parks sticker and the letter 'B'.

C Class Moorings

- installed to provide very large vessels with close access to reef systems. Vessels of this size and type have an ability to anchor in deep water and usually tender passengers into bays and onto beaches. Moorings for these vessels are not regarded as being in high demand within the Planning Area;
- for vessel up to thirty-five (35) metres in overall length;
- for use at wind speeds up to 24 knots;
- identified by a blue buoy displaying a purple and white Marine Parks sticker and the letter 'C'.

Dedicated Use Moorings

- installed where dedicated use of the bay is required for tourism, and would generally be shared by a number of operators.

APPENDIX 3: Conditions for Special Events.

1. Areas of Operation

- Activities as applied for shall take place only in areas designated by the QDoE. At Whitehaven Beach this will be no less than one kilometre north of the camping area.
- All activities including those of patrons and associated guests will be confined to an area below HWM. Where this is difficult to identify, the vegetation line will be used as the HWM.

2. Visitor Control

- All patrons are to be requested to avoid interference with other users of the National and Marine Parks. In the case of Whitehaven Beach, the QDoE facilities are not to be accessed.
- An on-site coordinator responsible for visitor control shall be appointed by the permittee. The QDoE will be advised of said coordinator no less than two (2) days prior to the day of the event.
- Toilets to be provided on accompanying vessels and arrangements made for the transport of participants to the vessel as required. Under no circumstances are patrons and associated guests to move through the vegetation line.
- The feeding of the fauna is prohibited.
- All patrons and guests are required to put cigarette butts in bins to be provided by the permittee for the event.

3. Entertainment and Catering

- All cooking to use gas stoves or barbeques (no open fires).
- All fat and other cooking by-products to be collected and removed. Under no circumstances should fat or other cooking by-products be disposed of in the sand.
- No glass beverage containers to be used.
- All rubbish to be removed from the site to the mainland/resort as appropriate.

4. General

- All activities to comply with any requirements of other laws of the State of Queensland or laws of the Commonwealth.
- All patrons and associated guests must be aware of the above conditions and the fact that the area is a National and Marine Park. Failure of the permittee to control guests to the above conditions will result in the refusal of future permits for such events.

APPENDIX 4: GBRMPA Sewage Discharge Guidelines

Direct Point Source: Discharge into the GBRMP

GBRMPA has adopted the following policy for point source discharge of sewage effluent from marine outfalls into the GBRMP:

1. Tertiary treatment systems involving nutrient removal are required of all operators discharging sewage effluent into the GBRMP. The Authority has proposed three alternative methods to achieve the requirement involving nutrient removal:
 - the use of nutrient stripping treatment plants where nitrogen is removed by denitrification and phosphorus removed by precipitation into the sludge. This method of treatment ('tertiary treatment') must be completed prior to the discharge of any resulting effluent into the Marine Park. The discharge must only be undertaken through an approved marine outfall discharge system; or
 - the use of secondary treatment plants followed by the irrigation of effluent onto suitable land areas. This method of treatment ('equivalent tertiary treatment') must be completed prior to the discharge of not more than 5% of the annual total effluent volume into the Marine Park. The discharge must only be undertaken through an approved marine outfall discharge system. The land irrigation system should comply with the requirements of the QDoE; or
 - the removal of the sewage or effluent to the mainland for treatment in a municipal treatment plant.
2. Applications for permits to discharge waste into the Marine Park will be assessed against the assessment criteria stated in the Regulations, and will be considered on a site specific basis, taking into account proximity of environmentally sensitive sites, hydrodynamics, ambient water quality, and present condition of any sensitive communities.
3. Sewage treatment plants must be under the control of a qualified operator. Acceptable qualifications are a certificate in operation for sewage treatment plants from a Queensland Distance Education College or equivalent.
4. Operators must give appropriate consideration to the disposal of sewage sludge to minimise undesirable environmental effects. Environmentally friendly detergents with low phosphate levels should be used wherever possible to minimise discharge of phosphorus.

Implementation Schedule

1. All sewerage systems must now (since 1 January 1996) be of a tertiary or equivalent standard such that most of the nitrogen and phosphorous are removed from the effluent before discharge into the Marine Park. The standards required to achieve this objective are different for tertiary and equivalent tertiary. The standards of the resulting effluent from a full tertiary treatment plant are:
 - (i) total nitrogen must be less than 4 mg/l and total phosphorus less than 1 mg/l; and
 - (ii) the 5 day Biochemical Oxygen Demand must not exceed 20 milligrams per litre; the Suspended Solids must not exceed 30 milligrams per litre; the pH value must be not less than 6.0 nor more than 8.5; the Dissolved Oxygen must not be less than 2 milligrams per litre; the oil and grease must not exceed 10 milligrams per litre; and the discharge must not produce any visual evidence of oil or grease; and disinfection by methods other than chlorination must be considered in cases where concern exists regarding impact on the environment of disinfection by-products.

The standards for effluent from secondary treatment plants to be used for land irrigation are the same as those described previously in part (ii) for full tertiary treatment.

2. Approved marine discharge outfall systems are those systems where outfall pipe discharges in deep water (10m or greater), well beyond the low tide mark, at a point which optimises diffusion, and the pipe fitted with a diffuser of a design satisfactory to the Authority. The design of the system, for the protection of reef ecosystems, will include consideration of diffuser design, water depth, current velocity, tidal range and proximity to reefs.
 3. In line with the requirements of the Environmental Management Charge, all permittees are required to keep and submit quarterly records to the Authority which include:
 - (i) total volume of effluent generated in that quarter;
 - (ii) total volume of effluent discharged through in the outfall in that quarter;
 - (iii) an effluent analysis undertaken in that quarter by a National Association of Testing Authorities (NATA) registered laboratory for the following:
 - (a) total nitrogen;
 - (b) total phosphorus;
 - (c) suspended solids;
 - (d) 5 day Biochemical Oxygen Demand (BOD);
 - (e) #Dissolved Oxygen;
 - (f) #pH value.
- * Note where the value determined by analysis is below the detection limit, the value must be taken as the limit.
- # Dissolved Oxygen and pH should be measured on site.

APPENDIX 5: Research, Assessment and Monitoring Projects

Current and proposed projects	Ref. Section
Maintain a GIS and ensure that the results of research, assessment and monitoring projects are incorporated onto the database.	6, 7
Continue research into oceanographic processes of the Planning Area (including wave climate monitoring by in-situ wave-rider buoy)	6.1
Support appropriate research, resource assessment and monitoring programs on the reefs in the Planning Area (eg effects of anchoring on coral communities and state of fringing reefs) in high use areas.	6.2
Monitor the success of moorings and markers.	6.2
Assist in long-term reef-wide monitoring using video transects of fringing reefs as part of AIMS monitoring program).	6.2
Encourage and where possible undertake research, assessment and monitoring of seagrass and mangrove communities.	6.3
Support research into the effects of inshore trawling on seagrass communities.	6.3
Encourage research into the distribution and behaviour of marine animals to determine management requirements.	6.4
Investigate the occurrence and distribution of crocodiles on the islands within the Planning Area.	6.4.1
Identify significant turtle nesting and feeding areas.	6.4.2
Continue research on distribution and habits of dugong within the Planning Area.	6.4.3
Undertake research and monitoring to determine distribution and habits of humpback whales in the Planning Area.	6.4.4
Assist in monitoring coral regeneration after crown-of-thorns starfish outbreaks.	6.4.5
Continue to give support to the Queensland Herbarium vegetation survey of the Planning Area and recommend conservation requirements.	6.5
Conduct systematic vegetation monitoring and essential research projects.	6.5
Continue with development of plant species lists for the Planning Area.	6.5
Maintain and monitor a program of prescribed burning to maintain present diversity or restore prescribed conditions. Initial emphasis to be on native grasslands.	6.5
Monitor the effects of burning using photography. Undertake vegetation surveys to determine future requirements, in particular fire requirements for grassland and sclerophyll communities.	6.5
Determine effective control or eradication of weed species.	6.5
Support continued research and systematic monitoring of endangered, threatened and vulnerable native animals.	6.6
Maintain accurate records of incidental fauna observations by QDoE staff and volunteers.	6.6
Maintain involvement in research into the distribution, ecology, behaviour, population and habitat requirements, and the genetic importance of the isolated populations of Proserpine rock wallaby and the unadorned rock wallaby on Gloucester and Whitsunday Islands.	6.6.1
Continue to conduct systematic monitoring of seabird and shorebird feeding and roosting concentrations, including those at Eshelby Island, and if necessary restrict inappropriate activities.	6.6.2
Encourage research into the effects of feral animals on the natural environment.	6.6.3
Encourage research into biological control of introduced animals.	6.6.3

Monitor the populations and distribution of feral animals.	6.6.3
Encourage further research into the geology and geomorphology of the Planning Area.	6.7
Require monitoring of beach profiles and sediment movement to be a condition of any beach works.	6.7
Continue water quality monitoring in conjunction with other relevant authorities.	6.8.5
Undertake site surveys to determine cultural and heritage values prior to permitting or undertaking development works such as walking tracks and visitor facilities.	7.1, 7.2
Encourage further research into the cultural and heritage values of the Planning Area.	7.1, 7.2
Cooperate with appropriate organisations and individuals undertaking cultural and heritage research.	7.1, 7.2
Monitor the levels and patterns of use at popular sites and the associated impacts and where required restrict day visits through site plans (eg video time lapse monitoring at Whitehaven Beach).	8.3.1
Monitor impacts of camping and rotate campsites where necessary to minimise impacts on natural values.	8.3.2
Introduce method of assessing visitor experiences to assist in review of management strategies (eg camper questionnaire).	8.3.2
Monitor the impacts of special and organised events (eg litter, trampling of vegetation etc).	8.3.4
Monitor the levels and patterns of use of walking tracks and the associated impacts.	8.3.5
Monitor the success of the moorings and markers program.	8.4.1
Monitor use of facilities during peak demand to determine the need for additional facilities.	8.4.2
Require developer funded monitoring programs associated with pontoon installation.	8.5.2
Complete natural and cultural resource assessment for all sensitive sites as a basis for Site Plans.	1,2 Site Plans
Monitor the impacts of use and rotate or relocate commercial campsites and/or activities as required.	8.6.5
Implement recommendations and strategies arising from the results of the GBRMPA 'Effects of Fishing' research program when completed.	9.1
Increase monitoring of traditional hunting permit returns.	9.9
Implement recommendations from a comparative risk and cost/benefit analysis of shipping using an alternative route to the Whitsunday Passage Shipping Area in consultation with AMSA, QDoT, the shipping industry and other relevant authorities.	10
Require permittee-funded monitoring of environmental impacts for all marinas and jetties.	11

FIGURE 1

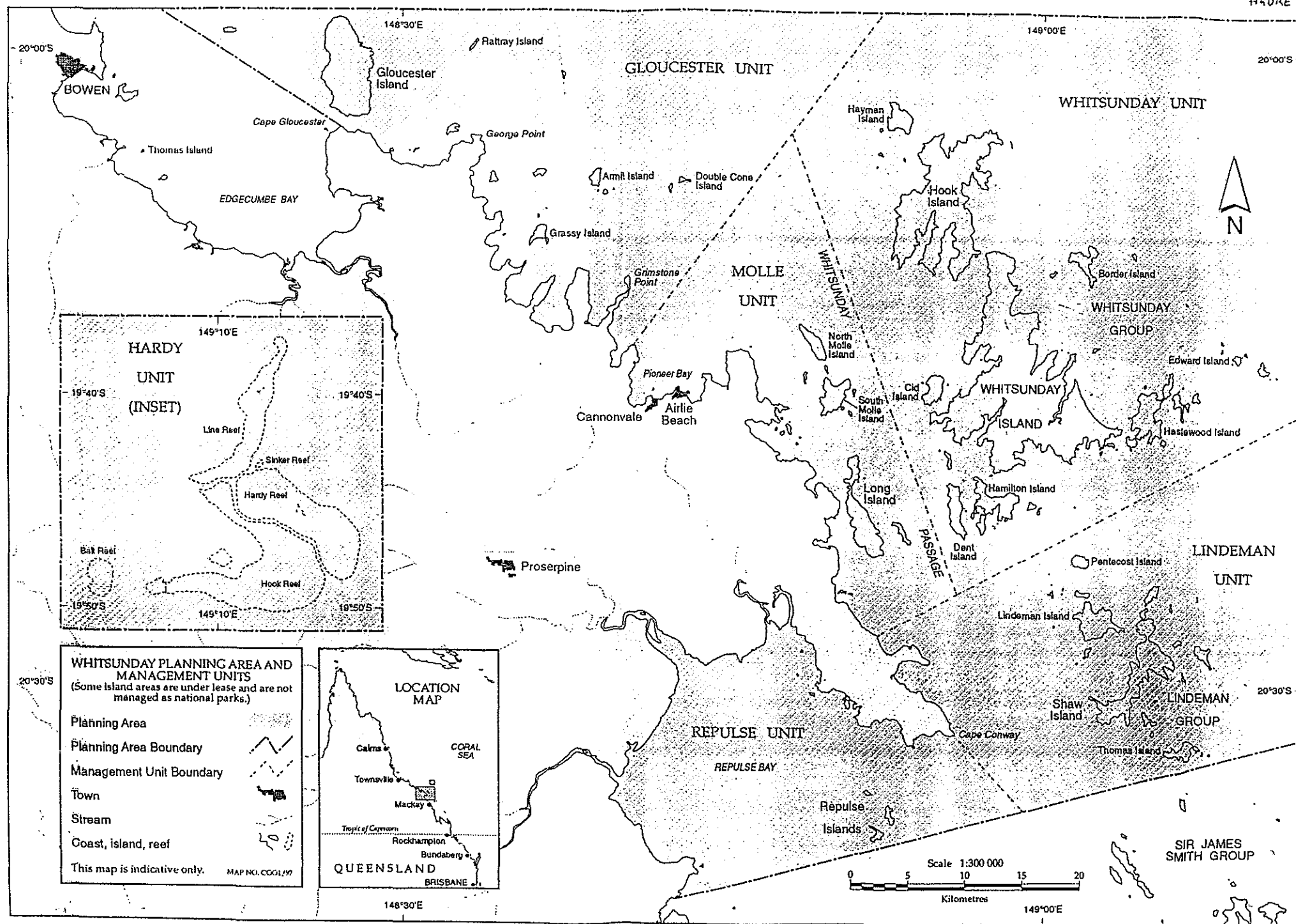
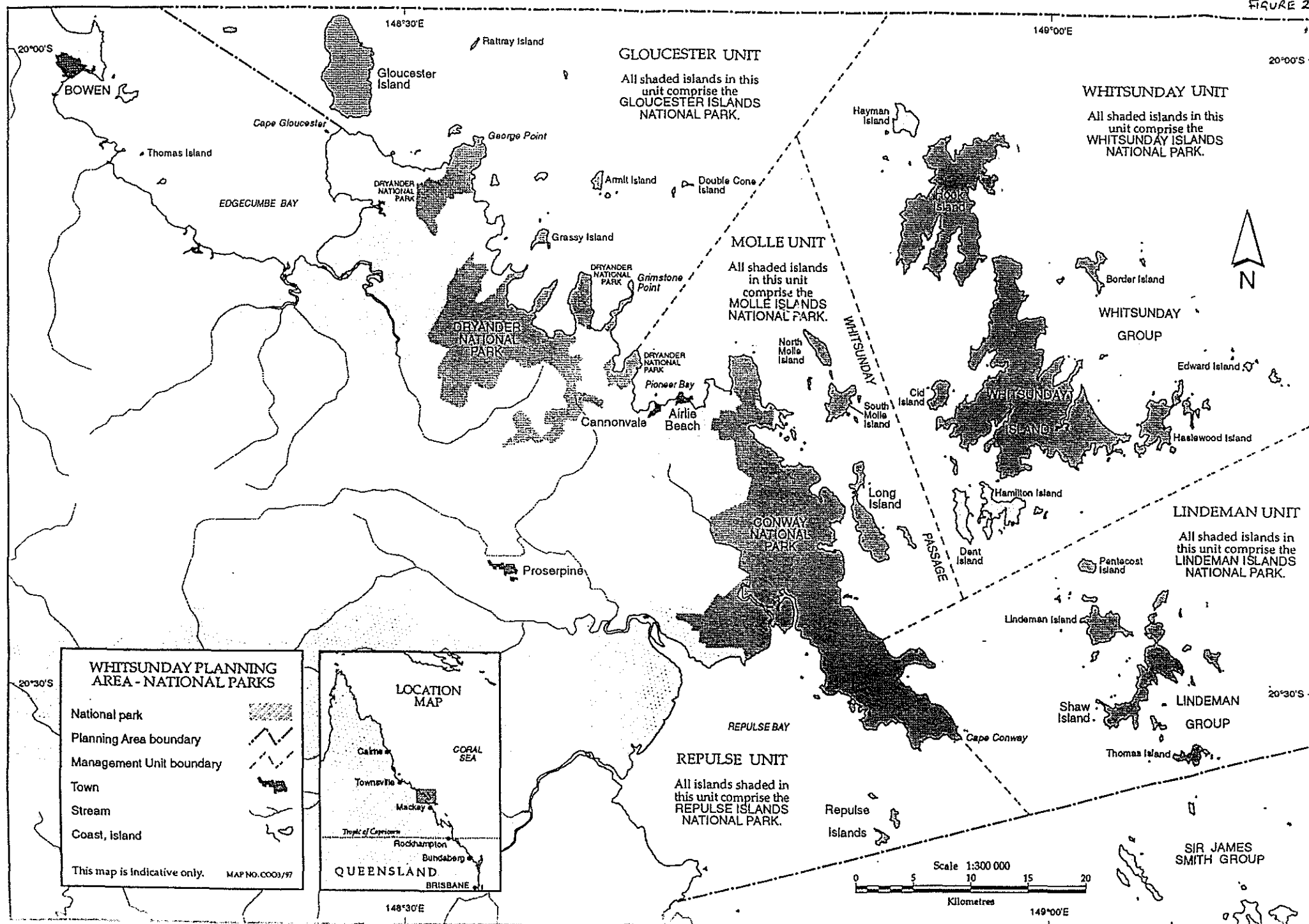


FIGURE 2



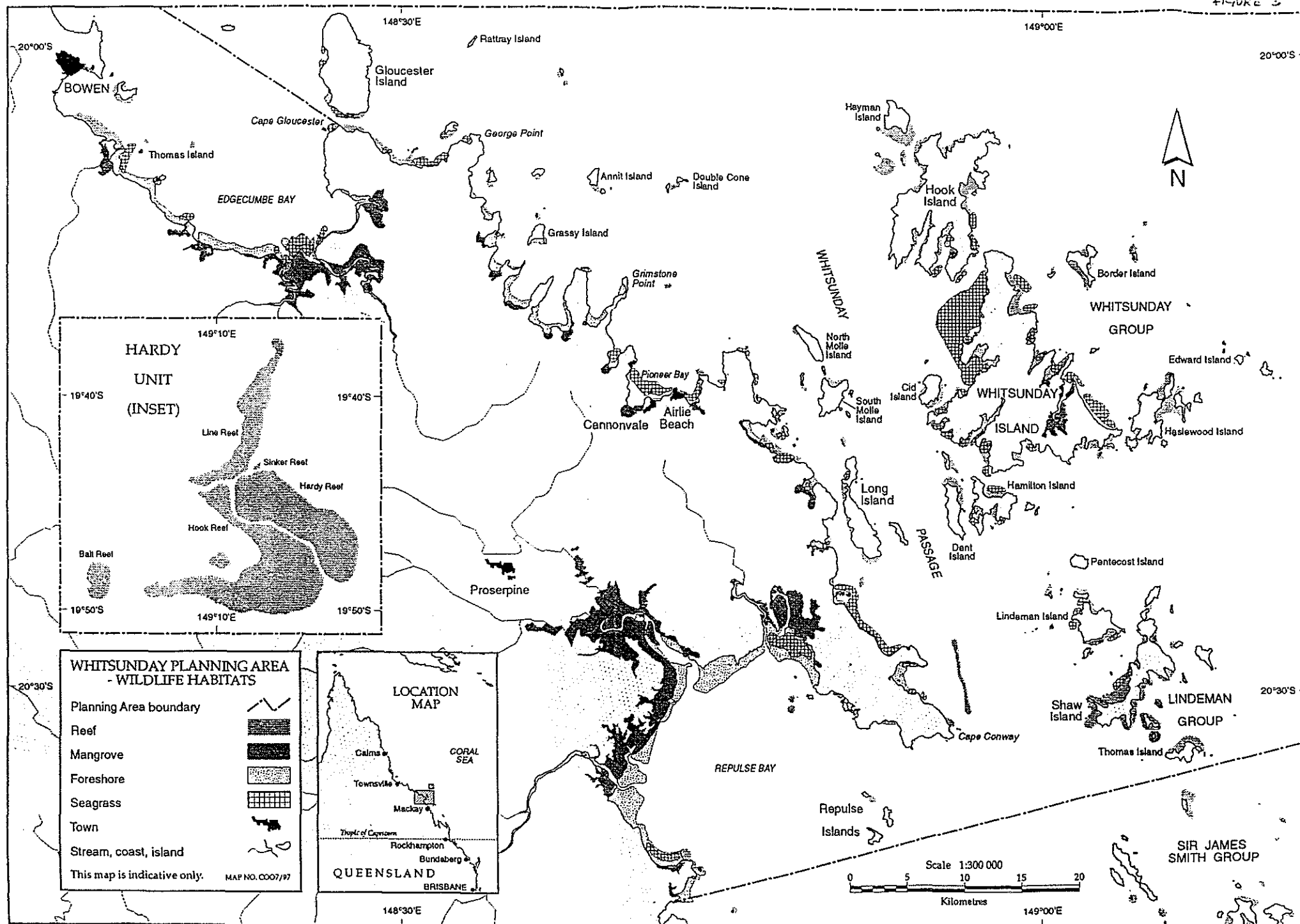
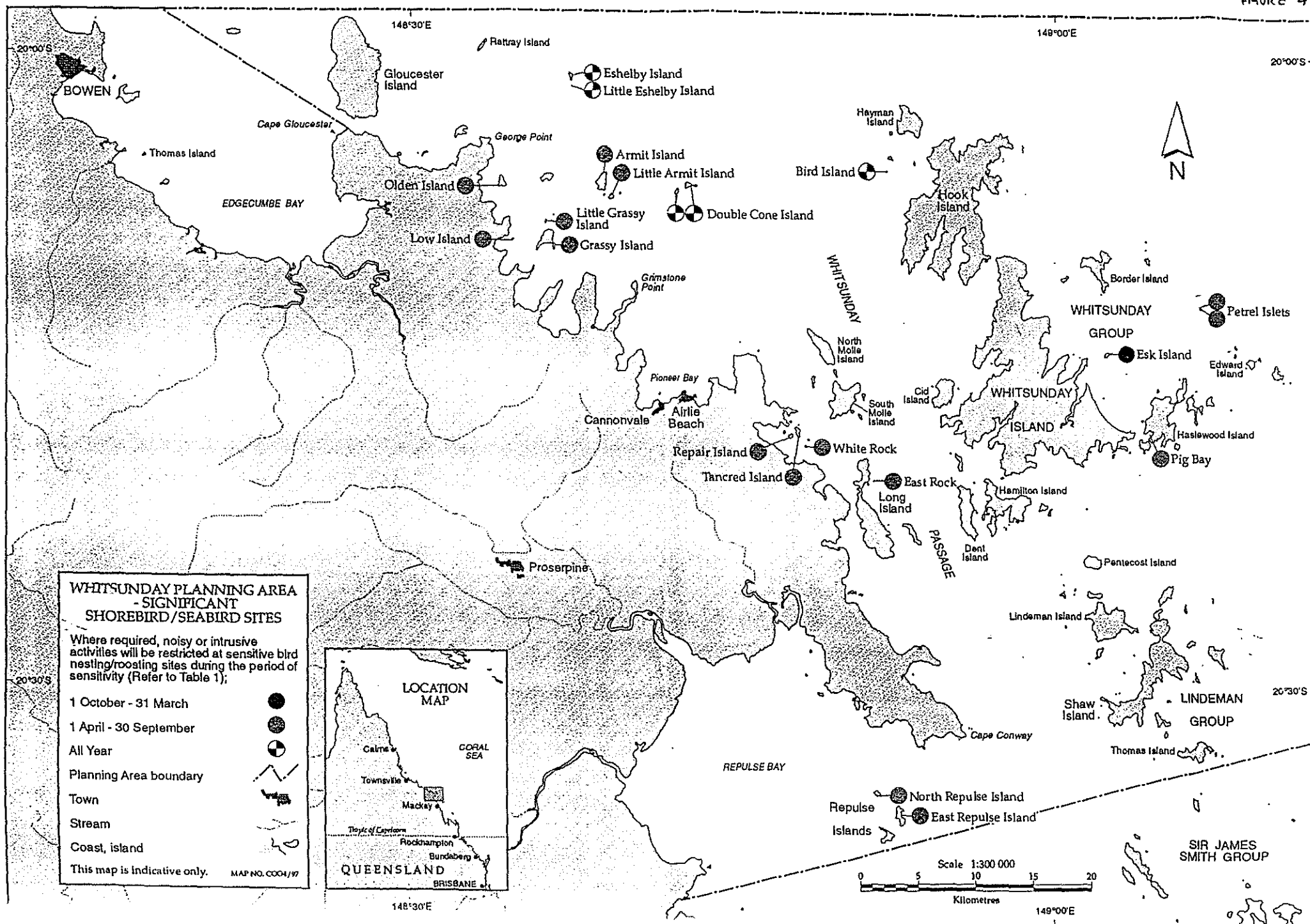
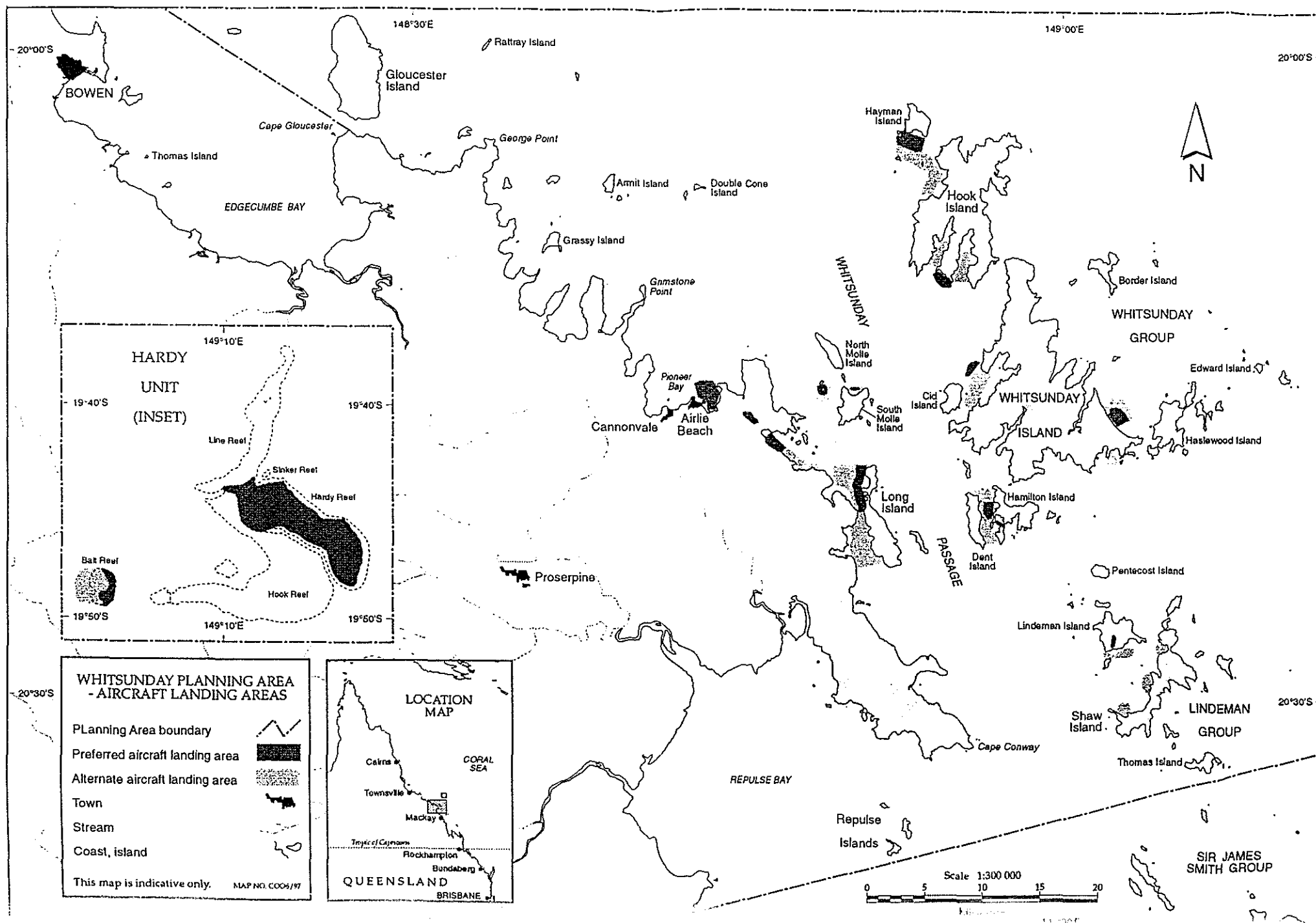
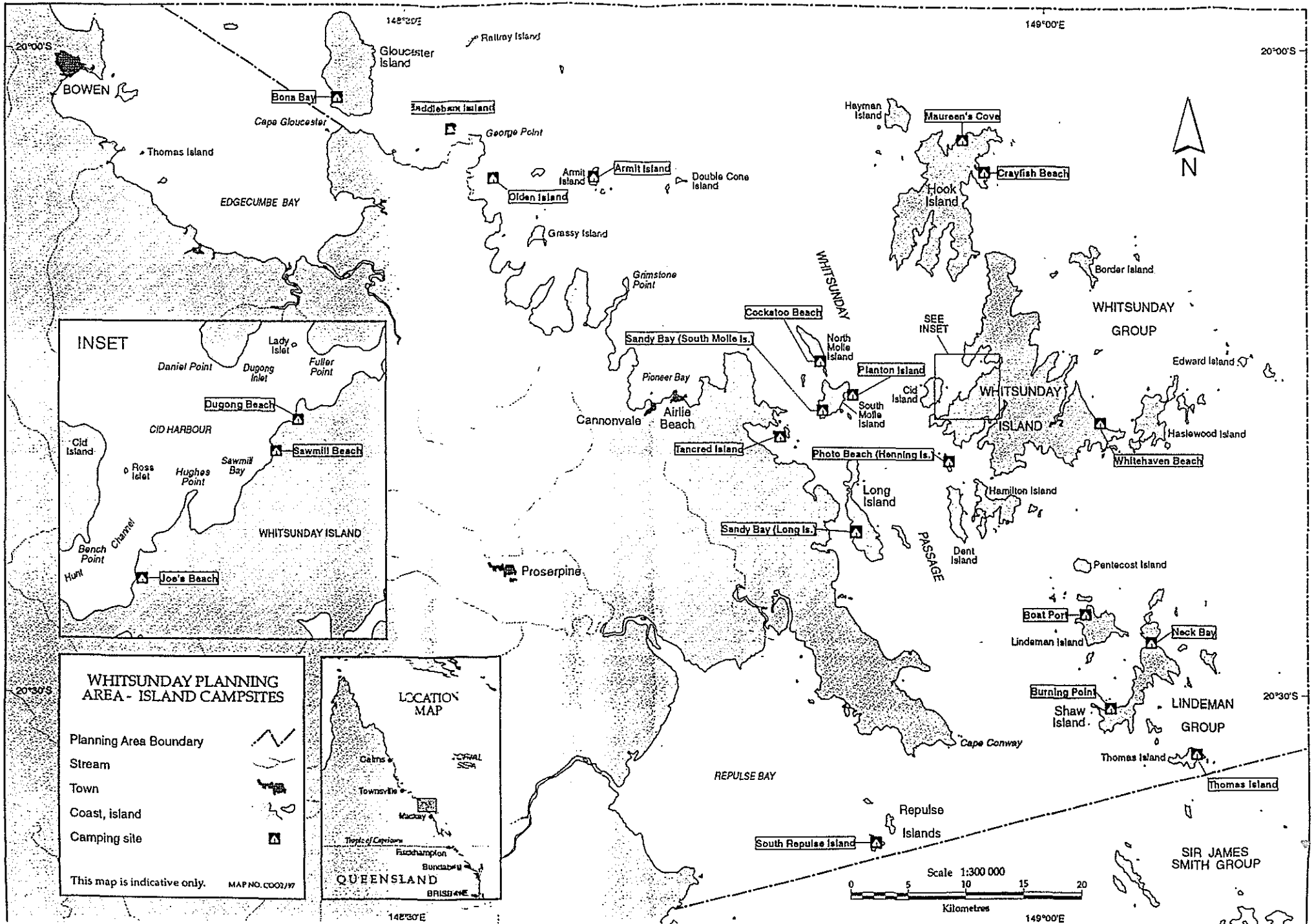


FIGURE 4









Subject: Whitsunday SP

Date: Tue, 09 Jan 2001 17:02:34 +1000

From: Chris Smalley <c.smalley@gbrrmpa.gov.au>

To: Carol Honchin <carolc@gbrrmpa.gov.au>, Denise Hill <deniseh@gbrrmpa.gov.au>

(Denise, can you please forward the message to the recipient of the second copy of the Plan)

The strategic Plan copied to you was adopted by MPA 166/5.

The following amendments to the Strategic Plan were made by the Authority (MPA 167/3)

Strategic Plan for Management of the Whitsunday Marine and National Parks
Proposed Revisions

The following statements are proposed as replacements for certain Actions and Guidelines in the Strategic Plan, adopted as Authority policy (MPA 166/5).

8.2.6 Whale Watching:

Dot Point 2: Continue to cap the number of craft permitted to conduct whale watching/spotting.

Dot Point 3: Preclude commercial whale watching/spotting inside the Limited Whale Watching Area (see Figure 8).

Dot Point 5: Preclude a vessel or aircraft from approaching within 300 metres of a whale inside the Limited Whale Watching Area (see Figure 8).

8.2.10 Aircraft, Dot Point 3: Limit aircraft landings & take-offs (eg. 2 in 7) outside Regular Aircraft Landing Areas (see Figure 6).

8.2.11 Large Vessels, Additional Dot Point: Consider a large vessel to be a vessel in excess of 20 metres in overall length.

8.5.3 Moorings and Markers, Dot Point 2: Continue to cap the number of permitted moorings, except immediately adjacent to, and in association with, a resort or coastal settlement (ie. Setting 1), or a pontoon.

8.6.1 Site Specific:

Dot Point 1: Continue to cap the number of permitted site specific craft, except to a permitted facility (ie. to moor only).

Dot Point 4: Allow permitted site specific craft to increase their passenger capacity and/or overall length, and to vary their activities and/or locations, noting Setting and mooring limits.

8.6.2 Roving:

Dot Point 1: Continue to cap the number of permitted roving craft, except for short term access to the Planning Area (ie. up to 42 days per year, except when transiting).

Dot Point 2: Allow permitted roving craft to increase their passenger capacity and/or overall length, and to vary their activities and/or locations, noting Setting limits.

Dot Point 3: Limit use of individual locations by roving craft (eg. 2 in 7).

The following Figures are proposed as new Figures or replacements for certain Figures in the Strategic Plan, adopted as Authority policy (MPA

156/5).

Figures

Revised Figure 5: Settings for Tourism and Recreation:

. Cid Harbour, Turtle Bay and Line/Hook Channel have been changed from Setting 3 (Moderate Recreational Use) to Setting 2 (High Recreational Use), to reflect their designation as cruise ship anchorages, and to provide additional destinations for craft carrying more than 40 people.
. The Setting 2 area at Chance Bay has been expanded, to provide more anchoring flexibility.

New Figure 8: Limited Whale Watching Area.

THIS DOCUMENT also contains map images.

Thanks

Chris Smalley

