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Introduction

The World Heritage List

World Heritage listing is a recognition by the international community that an area is such an outstanding example of the world's natural or cultural heritage that its conservation is of concern to all people. The World Heritage List is administered under the World Heritage Convention. Australia adopted the Convention in 1974.

Adoption of the Convention does not give ownership of lands listed or legal powers over them into the hands of foreign organisations or countries. Australia retains full sovereignty over listed areas. The Australian Government has ultimate responsibility for implementing the World Heritage Convention in Australia and ensuring that Australia's World Heritage listed properties are properly managed.

There are currently 11 Australian sites on the World Heritage List including The Tasmanian Wilderness, Kakadu National Park and the Great Barrier Reef. Globally there are more than 300 properties listed including Sagarmatha (Mt Everest, Nepal), Yellowstone National Park (USA) and Fiordland (New Zealand).

Figure 1
Wet Tropics of Queensland
World Heritage Area

World Heritage Values of the Area

In order to qualify for inclusion on the World Heritage List, a nominated area must be of outstanding universal significance. At the time of listing, an area nominated for its natural values needed to meet at least one of the following criteria. It had to:

- represent a major stage of the earth's evolutionary history; or
- provide outstanding examples of ongoing geological and biological processes; or
- contain superlative natural phenomena or areas of natural beauty; or
- contain the most important natural habitats for the conservation of biological diversity.

The Wet Tropics of Queensland World Heritage Area satisfies all these criteria.

Eight major stages in the earth's evolutionary history are represented here. The rainforests of the Area are internationally recognised as being very significant in a particularly important stage of the earth's evolutionary history, namely the origin, evolution and dispersal of flowering plants (angiosperms).

Major landforms include steep to undulating plateaus lying between 600m and 900m, mountain peaks rising to 1622m, and coastal lowlands linking to the higher country through steep escarpments, ranges and foothills. The escarpment is characterised by deeply incised valleys and streams.

Vegetation within the Area is mostly rainforest, but includes species rich mangrove forests, wet sclerophyll forests and tall open forests. The Area is home to more than 3000 plant species. At least 25 species of vertebrate animals in the area are regarded as very rare, found only in small areas or in danger of extinction.

More information on the Area and its World Heritage values can be found in *The Wet Tropics in Profile*, a useful background document to this plan. This publication is available from the Wet Tropics Management Authority's office in Cairns.

History of the Listing

The World Heritage listing of the Wet Tropics of Queensland on 9 December 1988 occurred amidst a great deal of controversy and followed several years of campaigns for and against rainforest logging.

Growing recognition of the region's conservation values and the threats to them resulted in conflict such as the Bloomfield Track blockade of 1983 and 1984 which attracted national and international attention. Community awareness of the values of rainforests continued to grow through the 1980's and concern about their destruction through logging, rural residential subdivision and clearing for agriculture led to many letters and petitions being presented to government.

There was conflict between the then Queensland Government, which supported logging of the rainforests, and the Commonwealth Government which proposed to nominate the wet tropics for the World Heritage list. Debates raged in the parliaments and communities were split into groups for and against listing. Many welcomed listing as protection for a dwindling natural treasure while others could see only loss of jobs and loss of land or its use.

The Wet Tropics Management Scheme

In 1990 the Commonwealth Government and a new Queensland Government set up a management scheme for the Wet Tropics of Queensland World Heritage Area. This involved joint funding and establishment of the Wet Tropics Management Authority in 1992.

The Wet Tropics World Heritage Area Management Scheme is an intergovernmental agreement signed originally by the Prime Minister and Premier of Queensland in 1990. The agreement is scheduled to the Queensland Act and given effect by s.3 of the Commonwealth Act. A revised version was signed by Commonwealth and State Ministers in December 1995.

Special legislation for protection and management of the Area was enacted by Queensland in 1993 and the Commonwealth in 1994. The Queensland legislation, the *Wet Tropics World Heritage Protection and Management Act 1993*, was proclaimed on 1 November 1993, apart from ss.56 and 57. The Commonwealth legislation, the *Wet Tropics of Queensland World Heritage Area Conservation Act 1994*, was proclaimed on 15 March 1994.

Development of the Wet Tropics Plan

An obligation for the Authority, under both the intergovernmental agreement and the Act, has been to prepare a management plan for the entire Wet Tropics Area. Many people reflecting a range of communities and interests have been involved in the planning process.

The Authority recognises that community involvement helps to gain a greater understanding of the community's views on issues of importance and generates public support for, and ownership of, the Plan. In developing the Plan, an extensive community consultation program was developed and implemented. This program involved:

- three community attitudes surveys undertaken in 1992, 1994 and 1996 - respondents were contacted by telephone to determine their views on priority issues;
- a questionnaire distributed widely in March 1992 within the region, which asked respondents to identify and rate the issues they felt were most important in managing the Area;
- in August 1992 48 regional and special interest workshops involving more than 800 participants;
- release for public comment of the Wet Tropics Strategic Directions document in 1992 with public workshops, a freephone telephone service, invitations to provide comments and suggestions and a freepost comment guide; and
- release for public comment of the Draft Wet Tropics Plan in 1995 with public meetings and workshops, a freephone telephone service, invitations to provide comments and suggestions and a freepost comment guide.

This Plan addresses issues which were raised consistently by the community during all phases of consultation.

The comments and suggestions received during the public exhibition period of the draft Plan were carefully analysed and taken into account in the final Plan. To demonstrate the transparency of this process, a report documenting the major comments and suggestions and how these have been dealt with in the final plan has been produced and is available for perusal at the Authority's Cairns Office.

The Wet Tropics Plan is presented in two parts. The statutory Plan is subordinate legislation under the Act. It provides the legal framework for management of the Area and for constraining potentially damaging activities under s.56 of the Act. The management strategies contained in this document (Protection through Partnerships) detail the policy framework which guides decisions made under the legislation.

A desired future for the Wet Tropics Area

The Wet Tropics of Queensland World Heritage Area is one of the world's outstanding natural treasures and should be a bequest to all humanity. The desired future for the Wet Tropics Area is a place where...

- ...the full diversity of species and ecological communities are surviving and thriving in their natural habitats, retaining their genetic diversity and their potential for evolutionary development...
- ...the integrity of most of the Area is intact and natural processes can continue unimpeded...
- ...the rainforest Aboriginal peoples' long-standing association with the land and water in the Area is recognised, as is the significant contribution they can make to the management of cultural and natural heritage within the Area...
- ...the reasonable interests and aspirations of residents and business people are provided for...
- ...visitors are welcome to interact with and appreciate the majesty of the wet tropical forests without damaging the special values they came to admire...
- ...uses, including the provision of essential services and defence training activities, occur on an ecologically sustainable, non-destructive basis...
- ...management agencies, land holders and the community are working in partnership for the Area's enhancement, providing an inspiration to all Australians and to the rest of the world...
- ...decisions are based on the best available information and in the absence of information are guided by caution...
- ...the community is informed, involved, supportive and committed to help meet Australia's international obligation to protect, conserve, present, rehabilitate and transmit the Area to future generations.

Managing the Wet Tropics World Heritage Area presents us with a responsibility and an opportunity. Our responsibility is to transmit to future generations an environmental treasure undiminished by the enjoyment and use of our generation. The opportunity is to use, enjoy and present the Area to our family, friends and visitors from around the world.

By working together in partnership, we have the power, the opportunity and responsibility to ensure the Area is protected for this and future generations. The Wet Tropics Plan is designed to help make this challenging task a reality.

Guiding principles

Primary Goal

The Primary Goal for the Area is to implement Australia's international duty to "*protect, conserve, present, rehabilitate and transmit to future generations the Wet Tropics World Heritage Area, within the meaning of the World Heritage Convention*".

The Preamble to the Act clearly states that the Parliament recognises this as Australia's obligation under the Convention, and that it is the intention of the Parliament that the Area should be established and maintained as a world heritage area of the highest standard.

The Wet Tropics Plan is also about maximising the benefits of the Area for the local and wider community, while minimising threats to the Area's integrity. It is also about enabling groups and individuals throughout the wet tropics region to contribute to management of the Area.

Consistent with the Primary Goal, the following principles have been developed to help guide land management and community relations activities in the Area.

Land management principles

1. The integrity of the Area is best conserved by protecting as much of it as possible from disturbance and threatening processes.
2. This Plan is based on the understanding that the Area is considered by both Parliament and the international community to be of international significance, and that there are likely to be limits to the amount of growth and impact it can absorb without compromising its integrity.
3. Achieving the Primary Goal for the Area is dependent upon the co-operation and contribution of all levels of government, industry and the community, including conservation groups, resource users, Aboriginal peoples particularly concerned with land in the Area and the Area's neighbours. It is essential that management of the Area does not adversely affect adjoining areas and that activities from these areas do not harm the Area.
4. It is the intention of this Plan to ensure that the regional community can continue to participate to the greatest possible extent in the management, protection, presentation, enjoyment and sustainable use of the Wet Tropics World Heritage Area.
5. In implementing this Plan the Authority aims to manage any necessary existing or future community infrastructure within the Area to minimise the impact on World Heritage values.
6. The management of the Wet Tropics Area under this Plan will specifically respect and protect (as far as legally possible) the areas, sites and other values of cultural heritage significance to Aboriginal people particularly concerned with land within the Area.

7. In the spirit of co-operation, management approaches and implementation of this Plan should recognise and build on existing systems rather than duplicating them and should resort to additional regulation only where necessary.
8. Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. This is referred to as the precautionary principle. Consistent with this, all decisions will be based on the best available knowledge of the Area and, in the absence of information, will err on the side of caution.
9. Processes for and decisions about the conservation, management and use of the Area should be clear, efficient, equitable and consistent, and must ensure that the use is ecologically sustainable.
10. Prudent and feasible alternative methods or sites for potentially damaging activities should be explored and used to achieve net reduction in adverse impacts on the Area.

Community relations principles

It is important that the Area has a function in the life of the community. To help achieve this, a set of community relations principles has been developed to guide community involvement.

1. The Area has universal values which must be protected. People from throughout the world have a legitimate interest in ensuring the protection of the Area. Australia should respond to this by developing a successful model for conservation which includes community involvement in management of the Area.
2. The cultural and natural heritage of the Area should have a function in the life of the community and the local community should be involved in management of the Area.
3. Management of the Area is based on the shared responsibilities of a wide group of stakeholders. Achieving the Primary Goal requires mutually satisfying partnerships with the many communities of the region, particularly land holders within the Area and neighbours along its boundary. Economic, social and cultural benefits from World Heritage listing should be shared equitably without compromising the Primary Goal.
4. The rainforest has special meaning for most people in northern Queensland and the regional population's interests, knowledge and attachment to the Area should be acknowledged and respected. This particularly concerns the rainforest Aboriginal peoples whose culture and the rainforest environment are inextricably linked. The Authority will develop a collaborative relationship with Aboriginal peoples.

5. Trusting relationships should be built through dedication by all parties to openness, active listening, fair dealing and acknowledgment of protocols. Innovation, foresight and a capacity to embrace change must be continually developed in order to move towards the desired future for the Area.
6. Visitors are welcome to enjoy the Area in ways that maximise their appreciation and inspiration while minimising potential adverse impacts on the natural and cultural environment and surrounding communities. Subject to the provisions of this Plan, or more detailed management plans, access to the Area and the provision of facilities will be based on the principles of equity, with due regard given to ensure that age, gender, race, disability and economic status do not preclude appropriate visitor use and enjoyment of the Area.

Executive Summary

Protection through Partnerships

A key element of the Wet Tropics Plan is the principle of Protection through Partnerships. The Wet Tropics World Heritage Area is characterised by a diversity of different tenures, and a corresponding range of government agencies and private land holders with responsibilities for managing these tenures under different legislation.

The Authority recognises the valuable role various state government land management agencies, land holders, Aboriginal peoples, the private sector, voluntary conservation groups and the wider community can have in implementing the Plan.

To achieve this, the Authority seeks to form effective partnerships with government land management agencies and key sectoral groups to facilitate complementary management of the Area in accordance with the Primary Goal.

The Area's partners in protection, and their respective roles and responsibilities, are outlined in Section 1.1: Management partnerships.

The policy part of the Plan is divided into four chapters, and each chapter is divided into sections. Each section has a common format for addressing particular issues; a desired outcome, which describes the objective to be achieved for the particular issue; and policies and actions to address the issue and achieve the objectives in the desired outcome.

The Primary Goal

The Primary Goal of the Wet Tropics World Heritage Area is to implement Australia's international duty to protect, conserve, present, rehabilitate and transmit to future generations the Wet Tropics World Heritage Area, within the meaning of the World Heritage Convention.

The Primary Goal is derived from the World Heritage Convention, which requires State Parties to the Convention 'to take appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage'.

The Primary Goal is also referred to in the preamble to the Act, the Management Scheme Intergovernmental Agreement signed by the Commonwealth and State governments, and Commonwealth legislation (*Wet Tropics of Queensland World Heritage Area Conservation Act 1994*), which gives effect to the intergovernmental agreement.

Zoning Scheme

The Wet Tropics Plan zones the Area into four management zones. The basis for each zone, and a description of how it has been derived, is described in section 1.5. A description of the land included in each zone, the intended physical and social setting, and management purpose is provided. The area and extent of each zone is shown on 1:50 000 scale zoning maps.

Control of Potentially Damaging Activities

The Act provides that destruction of a forest product is a prohibited act. The Plan provides for additional prohibited activities, and exemptions from these, under certain circumstances, and in certain locations. The zoning scheme describes these locations, and Part 3 of the Plan describes those activities which are allowed, or subject to a permit, in the different zones.

Prohibited, Permitted and Allowed Activities

The Plan classifies activities for each zone as prohibited, requiring a permit, or allowed. Permitted and allowed activities are exemptions from the list of prohibited activities.

Activities whose impacts are considered to be “minor and inconsequential” are also allowed in all zones.

There are fewer exemptions to prohibited activities in zones A and B, and therefore a higher level of protection of natural values, than in zones C and D.

Permit System

The Plan details a permit system for consideration of applications for permitted activities.

Avoidance of duplication in permit issue is an important underlying principle of the permit process. If a permit is currently issued under another Act for an activity that will also be controlled under the Plan, only a single permit will be issued by a single permit issuing authority.

The most important consideration in assessing permit applications is the likely impact of the proposed activity on the Area’s integrity. The zone in which the activity is to be undertaken, and the effect on any nearby zone, must be considered in assessing the impact.

The Act requires the Authority to perform its functions in a way that is consistent with the principles of the National Strategy for Ecologically Sustainable Development, which include the precautionary principle. Applications for permits must be decided under the precautionary principle.

In deciding permit applications, the Authority must consider whether there would be net detriment to the integrity of the World Heritage Area, have regard to prudent and feasible alternatives, and a range of other heritage and community considerations that are relevant to the application.

Appeals under the permit system are first considered by the Authority as a review of the original decision. Appeals from the review process may be considered by the Planning and Environment Court. Further appeals may be considered by the Court of Appeal, but only on a matter of law.

The permit system provides for issue of permits under the Plan by permit entities, such as the Department of Environment and the Department of Natural Resources.

Guidelines

The Visitor Management Guidelines are presented in the form of a map (Map 1). The map shows areas according to preferred style of recreation opportunities on a regional scale, and identifies visitor locations as either existing and potential nodes, or existing and potential sites. Visitor nodes are considered appropriate for significant, developed visitor facilities. Visitor sites are not considered appropriate for significant, developed visitor facilities, and are more low key.

The Flora and Fauna Conservation Guidelines are described in Section 2.1 and are presented in the form of a table (Table 3). The guidelines provide conservation strategies for the management of threatened species and communities. Habitat protection and the abatement of threatening processes is essential to protect the whole diversity of natural values and maintain ecological processes and systems.

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1.1 Management partnerships

DESIRED OUTCOME...

The desired outcome is to achieve the Primary Goal for the Area through effective partnerships among the Wet Tropics Management Authority, land holders and land managers, government agencies, community groups, the private sector, Aboriginal peoples and the wider community.

Background information

Successful management of the Wet Tropics World Heritage Area will be based on a series of partnerships at both the local and the global level. At the global level, Australia has entered into a partnership with the other nations who are signatories to the World Heritage Convention. The Commonwealth Government, however, has the ultimate responsibility for implementing the World Heritage Convention in Australia and this responsibility has been given to the Wet Tropics Management Authority.

The Authority fulfills a planning, coordinating, funding and monitoring role in ensuring that management activities are complementary and contribute to achieving the Primary Goal, but it does not have day-to-day field management responsibilities. Day-to-day management of the Area is primarily the responsibility of land managers (mostly State Government land management agencies such as the Department of Environment and Department of Natural Resources).

Achieving the Primary Goal depends on the actions and support of a large number of stakeholders operating at many levels in numerous locations. These include principal land holders and managers, such as the Department of Environment and the Department of Natural Resources, Local Government authorities, a variety of other government agencies, Aboriginal groups and communities, private landholders, voluntary conservation organisations and other community groups, the private sector (including the tourism industry) and the wider community.

Wet Tropics Management Authority (the Authority)

The Wet Tropics Management Authority was set up to ensure Australia's obligation under the World Heritage Convention in relation to the World Heritage Area is met. The Authority is a body corporate with statutory powers defined under the *Wet Tropics World Heritage Protection and Management Act 1993*.

A Board of Directors is responsible for the way in which the Authority performs its functions and exercises its powers. The Board consists of six Directors; five of these are private citizens who serve as Directors in a part-time capacity. Two are nominated by the Commonwealth and two by the State. The Chairperson is jointly nominated. The Executive Director is a non-voting Director of the Board.

A Scientific Advisory Committee and a Community Consultative Committee are established under the Act. The Scientific Advisory Committee advises the Authority on scientific research and developments that are relevant to the protection and conservation of the Area. The Community Consultative Committee advises the Authority on the views of the community in relation to the Authority's policies and programs.

Consistent with its role as a planning, coordinating, funding, and monitoring body for the Area, the Authority will:

- provide direction and effective co-ordination of management through the preparation and implementation of plans, policies and strategies;
- develop a partnership approach to management of the Area with land holders and land managers, Aboriginal communities, the wider community, and the private sector;
- direct funding for effective management of the Area;
- assist land holders and other agencies to achieve the Primary Goal through their actions;
- monitor and report on the condition of the Area and success of management activities;
- act as a catalyst for achieving changes that benefit management of the Area;
- continue to develop community support for the Area and involvement in decision making, particularly through the Community Consultative Committee, the Scientific Advisory Committee and other advisory committees; and
- develop community education programs in relation to the Wet Tropics World Heritage Area.

Queensland Department of Environment

Under the *Nature Conservation Act 1992*, and consistent with this Plan, the Department of Environment has primary responsibility for nature conservation in Queensland. In accordance with its roles under the Act, the Department will continue to:

- gather information and provide community education;
- dedicate and declare protected areas and protect their natural and cultural resources;
- protect native wildlife and habitats;
- ensure use of protected wildlife and areas is ecologically sustainable;
- manage protected areas (including developing land management and conservation plans); and
- recognise the interests in nature of Aborigines and Torres Strait Islanders, land holders and the community and the need for their co-operative involvement in its conservation.

The Department will continue to manage commercial tour operations (including permit issue) and maintain infrastructure and public contact in areas under its management.

The Department will enter into a memorandum of understanding with the Authority which will specify consultation arrangements and agreed codes of practice relating to conservation and management activities in the Area.

The Department also has statutory responsibility for the protection of cultural heritage in Queensland, including identification, recording, and protection of particular cultural sites.

Queensland Department of Natural Resources

The Department of Natural Resources is responsible for land administration, resources management, land information and regional infrastructure development. Its mission is to support the economic growth of Queensland through the sustainable use, development and management of land, water and native vegetation resources.

Queensland Department of Main Roads

The Department of Main Roads is responsible for managing State-controlled roads within the Area. This includes transport planning, road construction and maintenance. Construction and maintenance of State controlled roads will be managed according to agreed codes of practice developed between the Authority and Department of Main Roads.

Queensland Department of Primary Industries

The Department of Primary Industries is responsible for the management of agriculture (including fisheries) and commercial forestry operations. Its mission involves promotion of these industries in an ecologically and economically sustainable way. The Authority and the Department will liaise over stream management and grazing practices to ensure that allowed and permitted activities are practiced in ways that do not damage World Heritage values.

Local government

This refers to the Department of Local Government and Planning and the local authorities of the 14 municipalities which cover the Wet Tropics World Heritage Area.

Local government is responsible for preparing and implementing local government planning schemes and local laws, maintaining local roads, bridges and airports, managing local government reserves set aside for public use, and managing water supply and resource extraction (quarries). Local government also makes decisions on development applications.

Under the *Local Government (Planning and Environment) Act 1990* the Authority is a referral agency for private development proposals both within and adjoining the Area. Maintenance of Local Government community infrastructure such as Shire roads and water supplies will be managed under agreed codes of practice developed co-operatively between the Authority and Local Government.

Other government agencies

Government agencies will be encouraged to work with the Authority to develop codes of practice similar to the Queensland Electricity Supply Industry's code. This particularly applies to public utilities such as water supply, roads and telecommunications. Such professional challenges could lead to opportunities for technology transfer to other areas requiring similar environmental sensitivity.

The capacities of other government agencies to provide particular services and activities (e.g. the Education Department's capacity to prepare educational materials concerning the Area) are recognised and will be supported wherever possible.

Private land holders

Land holders will be helped to implement this Plan to the maximum extent possible through the provision of resources and training and the development of management agreements.

Rainforest Aboriginal peoples

The long-standing association of Aboriginal peoples with land in the Area is recognised, as is the need to work with Aboriginal peoples in keeping with the principles of self-determination. In the spirit of reconciliation, positive steps will be taken to assist Aboriginal peoples to achieve their aspirations within the context of programs which achieve the Primary Goal.

Neighbours

The statutory Plan applies only to lands within the boundaries of the World Heritage Area and not to neighbouring properties. However, a co-operative approach to management will be sought with neighbours to maximise the benefits and minimise any negative impacts (both for neighbours and the Area). This may include a co-operative approach to concerns, such as control of feral pigs, and weed and fire management.

The tourism industry

The tourism industry is recognised as an ambassador for the Area and a major presenter of its attributes. Co-operative management with the tourism industry will be sought in order to ensure that tourism developments and activities are ecologically sustainable and benefit the Area. The Wet Tropics Tourism Liaison Group has been set up as a forum for liaison between the Authority, tourism operators and land managers.

The Authority considers that a commercial operation deriving benefit from the Area should be willing to make a meaningful contribution to its protection and management.

Working with the community

The roles of the Wet Tropics Community Consultative Committee and Scientific Advisory Committee will be supported and enhanced, as will those of Bama Wabu, Giringun Reference Group and other peak Aboriginal bodies.

Other industry or community liaison groups, similar to the Wet Tropics Tourism Liaison Group, will be set up as needed.

Community organisations will be encouraged to play an increasingly important role in active management of the Area using mechanisms such as co-operative management agreements and funding support. Community development programs, which increase the skills and capacities of communities to take a more active role in management, will be supported, particularly in projects involving smaller rural communities.

The voluntary conservation sector represents that part of the general community with a special interest in the conservation of the Wet Tropics World Heritage Area. The contributions made by the voluntary conservation sector such as community education, presentation and interpretation programs; facilitating community consultation on policy setting and management issues; and co-ordinating community reforestation efforts are recognised and encouraged. The Authority will endeavour to develop co-operative arrangements with the conservation sector that ensure an effective level of policy consultation and information exchange.

Community attitudes will be monitored periodically to measure community awareness, support and concerns relating to the Area.

The Authority will develop, in conjunction with the community, a community relations strategy which will be reviewed and updated every three years or sooner.

Visitors

People have a right to visit and enjoy the Area in ways that do not have significant adverse impacts on the environment. Subject to the provisions of this Plan, and other laws, access to the Area will be based on the principles of equity, with due regard given to ensuring that age, gender, race, disabilities and economic status do not preclude visitor use and enjoyment of the Area.

The Authority will seek to ensure, through interpretation, education and opportunities for involvement in its protection, that visitors will become ambassadors for the values of the Area by fostering greater understanding and appreciation of this remarkable environment and the need to protect it.

The global community

The managers of the Area will be encouraged to work with managers of other World Heritage properties and tropical rainforests for mutual benefit, especially with regard to information sharing.

1.2 Management codes of practice

DESIRED OUTCOME...

The desired outcome is to have management of infrastructure and other management activities in the Area undertaken in a way that is consistent with the Plan and the protection of World Heritage values.

Background information

The Area contains a variety of existing uses and use rights that may not directly relate to, or be compatible with, achieving the Primary Goal. Slight modification to many existing management activities could significantly minimise their adverse impacts on the Area (e.g. road management codes of practice that minimise canopy openings and concentrations of road water run-off) and maximise their contribution towards achieving the primary goal. The Authority can play a vital role in working with management agencies (primarily government) to develop agreements, such as operational guidelines and codes of practice, to ensure their activities are to a standard consistent with achieving the Primary Goal for the Area.

Management codes of practice are intended to be formalised agreements between the Authority and other groups or agencies with ongoing responsibilities for managing infrastructure or other aspects of the Area (e.g. defence forces, electricity industry, etc.).

Agreed management codes of practice will enable management agencies to undertake routine management activities without the need to apply for permits for each and every activity. Codes of practice would normally become conditions to a permit, and permits for relevant activities (e.g. routine maintenance) may then be issued for extended periods. An example of an existing management code of practice is the Queensland Electricity Supply Industry Code of Practice developed jointly between the Authority and Queensland Electricity Supply Industry.

Policies and actions

The Authority will develop management codes of practice in consultation with land managers, Local Government and other agencies or groups for activities which either involve destroying native vegetation or otherwise require a permit under this Plan. These may include:

- fire management;
- public utility management;
- mining and quarrying management;
- defence use management;
- road management; and
- conservation management.

Aboriginal involvement in development of codes of practice will be encouraged.

Where codes of practice have been agreed, they may become conditions of permits issued to government or semi-government agencies undertaking works in the Area.

These agreements may include:

- specific conditions and criteria to protect the integrity of the Area;
- operational guidelines for particular activities or activities occurring in particular areas; and
- a commencement date and an expiry date for the agreement.

If agreed to by all agencies involved, management codes of practice may also cover activities that do not require a permit under this Plan.

The Department of Environment, as lead agency for nature conservation and cultural heritage protection in Queensland (under the *Nature Conservation Act 1992* and other laws), will be exempted from the requirement to obtain a permit from the Authority for all activities and developments on protected areas in the Area, where these are consistent with the management principles for a national park and the intended physical and social setting and management purpose of the zone in which the activity is proposed. However, the Department will enter into a memorandum of understanding with the Authority which will specify consultation arrangements and adherence to codes of practice relating to conservation and related activities in the Area.

1.3 Co-operative management agreements

DESIRED OUTCOME...

The desired outcome is to encourage the community to participate in the management of the Area, through mechanisms which provide flexibility in the application of the Plan, consistent with the achievement of the Primary Goal.

Background information

The *Wet Tropics World Heritage Protection and Management Act 1993* provides for the Authority to enter into, and facilitate the entering into of, voluntary co-operative management agreements (CMAs), including joint management agreements, with land holders, Aboriginal peoples particularly concerned with land in the Area and other persons. Co-operative management agreements can play an important role in facilitating good management of the Area, enhancing the value of the Area and providing relevant community services. Co-operative management agreements may make provision for financial, scientific, technical or other assistance in relation to management of the Area. They may occur over lands inside or neighbouring the Area but only with the agreement of the relevant land holder.

Whereas management codes of practice (section 1.2) are formalised agreements between the Authority and government management agencies, co-operative management agreements are generally intended to be formalised agreements between the Authority and individuals, private land holders or community groups. Government agencies may also be involved, where they have a direct interest in the land or the activity.

Under the *Nature Conservation Act 1992*, the Minister for Environment may enter into conservation agreements with land holders for the protection and management of an area. Areas selected for nature conservation agreements must contribute significantly to nature conservation at the national, state, regional or local level. Criteria used to establish the nature conservation values of land suitable for conservation agreements include regional ecosystems, faunal assemblages, rare and threatened species and critical habitats and regional landscape values.

Co-operative management agreements under the *Wet Tropics World Heritage Protection and Management Act 1993* are not intended to duplicate or compete with conservation agreements made under the *Nature Conservation Act 1992*. The different advantages and applications of each type of agreement will be explained to landholders before negotiations commence.

Policies and actions

A special type of co-operative management agreement is available under the Plan. It is designed to allow activities which would be otherwise illegal under the Plan to be undertaken, provided that the agreement contributes toward the achievement of the Primary Goal.

At the initiation of an agreement, the Authority and the Department of Environment will each formally notify the other agency to avoid any overlap in the preparation of voluntary agreements and, where appropriate, to co-ordinate resources.

Co-operative management agreements and agreements made under the *Nature Conservation Act 1992* offer different advantages which will be clearly explained to landholders. Landholders may choose the agreement which best suits their needs.

Co-operative management agreements are contracts and will usually be an agreement between two or more parties. The parties may include:

- the land holder;
- the Authority;
- native title holders;
- Aboriginal peoples particularly concerned with land in the Area;
- the land manager (where the manager is not the owner).

The Authority will seek to facilitate co-operative management agreements between current title holders and traditional custodians of land.

Where Aboriginal owners or traditional custodians are party to an agreement under the Act, the Authority will consider meeting the expenses of an expert legal adviser to check the agreement on behalf of the Aboriginal people.

Co-operative management agreements will be directly concerned with management of the Area. Other benefits or outcomes may also be included as an adjunct to the primary management focus, such as provision of services sustaining Aboriginal cultural values (e.g. education, interpretation), not necessarily limited to any particular land.

Co-operative management agreements will be actively canvassed for lands outside the Area where this contributes to achieving the Primary Goal for the Area and where landholders have expressed an interest.

The Authority may offer benefits to a land holder through a co-operative management agreement as cash or kind (e.g. information, resources).

Outcomes sought by the Authority and Authority contributions to other parties will be clearly defined and as specific as possible. Open-ended outcomes and contributions will be avoided.

Co-operative management agreements for a particular piece of land will not constitute management plans under the Act, unless all parties to the co-operative management agreement agree to seek this status. Where a cooperative management agreement under the Plan is proposed to allow a potentially damaging or otherwise illegal activity regarded by the landholder as essential, the Authority will seek conditions or approaches which minimise the adverse impact. The agreement may also include other works or undertakings by the landholder that contribute directly to the Primary Goal.

1.4 *Aboriginal involvement in management*

DESIRED OUTCOME...

The desired outcome is recognition and appreciation of rainforest Aboriginal culture and meaningful Aboriginal involvement in management of the Area.

Background information

There are about 16 Aboriginal language groups and associated communities in the Area. It is one of the most culturally diverse and densely populated areas of Aboriginal association with the landscape in Australia. These communities have a traditional duty for managing their cultural heritage, which includes the natural environment. Yarrabah and Wujal Wujal are two Deed of Grant in Trust (DOGIT) communities which have statutory land management rights and responsibilities under the *Community Services (Aborigines) Act 1984*. Many other Aboriginal communities also wish to be meaningfully involved in managing the Area.

Aboriginal peoples wish to have the Area recognised as a living cultural landscape. The Aboriginal world-view is that the natural values and cultural values cannot be separated. Cultural values include the living, continuous traditions of the Aboriginal peoples who are associated with the Area. For this reason, Aboriginal involvement in land management is considered essential to maintaining their culture. Many Aboriginal people want the Area to be renominated for World Heritage listing on cultural grounds, in addition to natural grounds.

There is growing support for increased Aboriginal involvement in managing the Area. This has been acknowledged by the Queensland Government. For example, The preamble of the *Wet Tropics World Heritage Protection and Management Act 1993* states:

“(8) It is also the intention of the Parliament to acknowledge the significant contribution that Aboriginal people can make to the future management of cultural and natural heritage within the Area, particularly through joint management agreements”.

Mechanisms for achieving greater Aboriginal involvement in management are provided under legislation such as the *Aboriginal Land Act 1991*, the *Commonwealth Native Title Act 1993*, the *Native Title (Qld) Act 1993*, or where the land is owned by Aboriginal peoples (e.g. DOGIT, freehold, etc.). These can range from information sharing and consultation arrangements between Aboriginal peoples and management agencies through to joint decision-making power. The *Nature Conservation Act 1992* and the *Wet Tropics World Heritage Protection and Management Act 1993* require the Department of Environment and the Wet Tropics Management Authority to perform their functions, as far as practicable, in consultation and co-operation with Aboriginal peoples.

The Authority has been undertaking a Review of Aboriginal Involvement in Management of the Area at the direction of the Ministerial Council. The Review involves some 14 Terms of Reference, based on two main themes:

- recognising Aboriginal people's aspirations; and
- identifying ways of better meeting these aspirations through the evaluation of existing and potentially new mechanisms of involvement.

Management agreements under the *Wet Tropics World Heritage Protection and Management Act 1993* provide one mechanism for negotiating increased Aboriginal involvement in management of the Area.

Consultation and negotiation are necessary to identify issues, resolve conflicts and move towards the desired level of Aboriginal involvement in management.

Policies and actions

Discussions will continue with Aboriginal peoples to identify opportunities and mechanisms for facilitating their meaningful involvement in management.

Where practical, opportunities will be provided for Aboriginal peoples to be involved in relevant decision-making and consultative processes.

The Authority will actively encourage consultation on all aspects of management that will impact on the rights, interests or traditions of rainforest Aboriginal peoples.

The Authority will aim to achieve Aboriginal involvement in planning and management of the Area and information sharing through the negotiation of co-operative management agreements under the *Wet Tropics World Heritage Protection and Management Act 1993*.

Processes for negotiating and consulting with Aboriginal peoples need to be culturally sensitive and recognise cultural differences.

In conjunction with relevant Aboriginal peoples and government agencies, the Authority will develop:

- a range of informal and formal information sharing and consultation arrangements between Aboriginal peoples and management agencies, which are sensitive to the particular needs of the Aboriginal community concerned;
- culturally appropriate and understandable formats for sharing management information with Aboriginal peoples;
- an agreed cultural protocol and code of ethics which addresses all facets of Aboriginal involvement in planning and management of the Area;
- a strategy for training and employing Aboriginal staff;
- educational and interpretive materials highlighting the contribution of Aboriginal peoples to planning and management of the Area;

- a cultural protocol and code of ethics for non-Aboriginal consultants and researchers; and
- a policy on intellectual property rights.

The Authority will facilitate research into Aboriginal traditional land management practices and the potential use of these practices in managing the Area.

The Authority will seek traditional Aboriginal knowledge of the distribution, status and conservation aspects of plants and animals and, where appropriate, use this information in management strategies.

The Authority will amend policies and actions in light of the results of the Review of Aboriginal Involvement.

The Review is expected to identify and develop:

- appropriate mechanisms for proceeding towards a memorandum of understanding or regional Wet Tropics agreement between government agencies and rainforest Aboriginal peoples;
- an agreed co-ordinated approach to Aboriginal involvement in World Heritage management; and
- a range of practical measures to involve Aboriginal peoples in all levels of management.

The Review deals with a range of policy areas beyond the scope of the Plan.

Joint management

The Authority will encourage development of joint management agreements.

Where land is national park, Aboriginal involvement in management will be negotiated between the Department of Environment and Aboriginal peoples in accordance with the provisions of the *Nature Conservation Act 1992*. Aboriginal involvement in national park management may include co-operative management arrangements or joint management arrangements. The Department sees joint management as an option where the land is Aboriginal land or where native title rights exist. Where agreed by all parties, the Authority may facilitate negotiations and become a party to management agreements. Where policies and activities of the Authority affect Aboriginal involvement in national parks, these will be developed and implemented in partnership with the Department of Environment.

The fundamental role of the Authority in negotiating or facilitating management agreements is to ensure achievement of the Primary Goal for the Area and ensure Australia's obligations under the World Heritage Convention are being met. The Authority will seek to do this while respecting Aboriginal culture, and liaising with Aboriginal peoples.

Under management agreements the Authority may provide for financial, scientific, technical and other assistance for Aboriginal peoples to contribute to achieving the Primary Goal for the Area.

Management agreements must include, and have the support of, the land manager or owner.

1.5 Zoning scheme

DESIRED OUTCOME...

The desired outcome is to have the Area managed according to a framework which clearly indicates the management intent for different parts of the Area.

Background information

The Area is a diverse natural system with a variety of existing uses, and a range of tenures which offer different levels of protection of natural values. Some tenures within the Area, such as national parks, are managed according to legislation which affords a high level of protection of the natural values for which the Area was listed. There are many other tenures in the Area, however, that do not offer the same level of protection.

The Act provides for a management plan to divide the Area into management zones. A zoning scheme with associated land use controls for activities occurring or proposed for each zone is the most practical means of providing an appropriate level of protection for the natural values of the Area, and for managing activities which have the potential for adverse impact on those natural values.

Policies and actions

The zoning scheme divides the Area into four management zones. The zoning scheme is based on a “distance from disturbance” model.

The principles for assessing wilderness in the National Wilderness Inventory (NWI) undertaken by the Australian Heritage Commission were used in assessing the integrity of natural values in the Wet Tropics World Heritage Area.

The NWI is an environmental database and set of modelling procedures developed by the Australian Heritage Commission to assist in the planning and management of remote and natural lands in Australia.

Four wilderness quality indicators were used in the NWI:

- remoteness from access - how remote a site is from established access routes
- apparent naturalness - the degree to which a site is free from permanent structures associated with modern technological society
- biophysical naturalness - the degree to which a site is free from biophysical disturbances caused by modern technological society
- remoteness from settlement - how remote a site is from established settlements.

Of these four wilderness quality indicators the first three have been used to develop the zoning scheme for the Area. The fourth indicator, remoteness from settlement, was not used, because built up areas are largely outside the Area.

The four zones in the zoning scheme are described below. A summary of the land included in each zone, the physical and social setting, the management purpose, and the procedures used to generate these, is shown in Table 1. The Authority's Geographic Information System (GIS) generates the zone boundaries according to set criteria.

Zone A

Zone A is a natural area with high ecological integrity, remote from disturbances associated with modern technological society.

Zone A has been developed using the first three wilderness quality indicators from the NWI. To qualify for inclusion in Zone A land must:

- be at least 500 metres from all roads, cableways, powerlines, pipelines, towers, mines, quarries and other structure; and,
- be at least 700 metres from clearings;
- include a minimum area of 150 hectares of undisturbed core; and
- no obvious signs of disturbance in the last 40 years.

Zone B

Zone B is a natural area, not necessarily remote from disturbance, but where the land still has a high degree of ecological integrity and there is a reasonable expectation that it could be returned to a condition which would qualify for inclusion in Zone A.

Zone B has also been developed using the first three wilderness quality indicators from the NWI. Lands in Zone B must:

- be less than 500 metres from all roads, cableways, powerlines, pipelines, towers, mines, quarries and other structures; or,
- be less than 700 metres from clearings; or
- include an area of up to 150 hectares of undisturbed core;
- some obvious signs of disturbance in the last 40 years; and
- not overlap with Zones A, C and D.

Zone C

Zone C is a mostly natural area, where disturbances associated with community services are accommodated.

Zone C includes areas where there are clearings, roads, powerlines, pipelines, dams and cableways. The criteria used to generate Zone C included set distances around the above disturbances (except clearings) based on the minimum required for essential management practices associated with the disturbance. In some cases, a matrix based on the presence or absence of closed or open forest, and the presence or absence of rare, threatened or vulnerable species or communities (as described in the Flora and Fauna Guidelines in section 2.1) was used to determine these set distances. Examples of the distances used for each of the disturbances above are detailed below:

- roads - a distance of between 50 and 250 metres from the centreline of roads classified as presentation roads, including State controlled, Shire, presentation (restricted) and presentation (unrestricted) roads, determined by the following matrix:

	rare, threatened or vulnerable species or communities present	rare, threatened or vulnerable species or communities absent
closed forest	50m	100m
open forest	100m	250m

- dams - a distance of between 50 and 250 metres, based on the above matrix
- powerlines - a distance of 100 metres from powerlines
- pipelines - a distance of 100 metres from pipelines
- cableways - a distance of 50 metres from cableways
- clearings - cleared areas identified from satellite images and the most recent aerial photographs, which are associated with existing use rights, have been included in Zone C. These include, but are not limited to: quarries, gravel scrapes, paddocks, building or home sites, orchards and plantations, forestry camps, national park carparks, cane fields, pine plantations, Mona Mona settlement, rifle ranges, forestry buildings, Buddabadoo settlement, ranger stations, research plots, meteorological station, airstrips, radio towers and Army camps. Clearings associated with and integral to a State Government agency's charter, such as quarries for road maintenance operated by Department of Environment and Department of Natural Resources have also been included. Clearings not associated with an existing use right are not automatically included in Zone C, because the management intent for these is removal of disturbance and rehabilitation over time, when opportunities arise.

Zone D

Zone D is a mostly natural area, where existing or proposed visitor facilities are accommodated.

Zone D is derived from the Visitor Facility Nodes as shown on Map 1 - Visitor Management Guidelines, and visitor facility sites within Zone C. Existing Visitor Facility Nodes have visitor infrastructure present, are accessible by vehicle along roads classified as presentation roads, and provide a location to access a range of recreation opportunities. Potential Visitor Facility Nodes have been identified following consultation with government land management agencies, industry and the community, and represent locations considered appropriate for development as Visitor Facility Nodes. Both existing and potential Visitor Facility Nodes have been included in Zone D.

The criteria used to generate the boundaries of Zone D use a radius from a central point at each Visitor Facility Node, based on a similar matrix to that used for roads and dams:

	rare, threatened or vulnerable species or communities present	rare, threatened or vulnerable species or communities absent
closed forest	75m	100m
open forest	100m	150m

Identical distances to the matrix for roads and dams were not used due to the dramatic increase in potential size of Zone D locations with each increase in radius. If the radius of a Zone D is increased two-fold, the area is increased four-fold. For example, a radius of 100 metres from a central point represents an area of 3.14 hectares. A radius of 200 metres from a central point represents 12 hectares.

NB: In certain instances, the above rules were deviated from deliberately to achieve a particular management outcome. Specifically

- *several individual roads were classified as Presentation (restricted) to provide particular presentation opportunities, but the surrounding lands retained their classification as zone A or B;*
- *lands surrounding Management roads retained their classification as zone A or B.*

The roads in question traverse lands of high ecological integrity. The road classifications and zoning arrangements are intended to ensure road use does not lead to erosion of the integrity of the surrounding lands.

Table 1. Zoning Scheme

	Zone A	Zone B	Zone C	Zone D
Physical condition	Remote from disturbance and in a mostly natural state.	Not remote from disturbance but still in a mostly natural state.	Land on which or adjacent to which there is infrastructure needed for community services.	Land on which there are, or are proposed to be, significant developed facilities to enable visitors to appreciate and enjoy the Area.
Physical and social setting	A natural area remote from disturbances associated with modern technological society. Visitors may expect opportunities for solitude and self reliance without an obvious management presence.	A natural area, which may be undergoing recovery or rehabilitation towards its natural state. An area where a visitor may expect opportunities for solitude and self reliance with a limited management presence.	A mostly natural area but with some disturbance by activities associated with modern technological society. A visitor may expect low key opportunities for nature appreciation and social interaction in a natural setting. Management presence may be obvious.	A mostly natural area with visitor facilities integrated into the surrounding landscape. Visitors may expect many opportunities to appreciate and enjoy the Area in a natural setting. A management presence may be obvious.
Management intent	To protect land in its natural state. If land is disturbed, to remove disturbance and restore land to its natural state.	To restore land to its natural state wherever practical, by relocating disturbances to land where they will have less impact, or to rehabilitate the land over time where opportunities arise.	To accommodate community services. To ensure that the impact of activities associated with community services is managed to minimise the effect on the integrity of the Area.	To accommodate developed visitor facilities to enable visitors to appreciate and enjoy the Area. To ensure that the impact of visitor infrastructure is managed to minimise the effect on the integrity of the Area.
Geographic Information System criteria	Land included in this zone is: <ul style="list-style-type: none"> at least 500m from infrastructure (e.g. roads, cableways, powerlines); and, at least 700m from clearings; and, at least 150ha in area with no obvious signs of disturbance in the last 40 years. 	Land included in this zone must be: <ul style="list-style-type: none"> less than 500m from infrastructure; or, less than 700m from clearings; and, less than 150ha in area with some obvious signs of disturbance in the last 40 years. 	Land included in this zone contains: <ul style="list-style-type: none"> roads, dams, powerlines, pipelines, cableways and clearings. GIS criteria include set distances around disturbances.	Land included in this zone is: <ul style="list-style-type: none"> derived from Visitor Facility Nodes and selected sites. GIS criteria include set distances around the centre of visitor facility locations.

1.6 Land use controls

DESIRED OUTCOME...

The desired outcome is to have the impact of potentially damaging activities managed to minimise the effect on World Heritage values.

Background information

Some activities currently undertaken in the Area, which have the potential for adverse impact on the integrity of the Area, are regulated by existing legislation, including the *Forestry Act 1959* for State forests and timber reserves, and the *Nature Conservation Act 1992* for protected areas.

Given that the Area is characterised by a diversity of tenures, and differing levels of protection for natural values, a system of land use controls is desirable which affords a consistent and high level of protection for the natural values for which the Area was listed, given Australia's international obligations under the World Heritage Convention.

Land use controls to achieve this objective need to recognise activities which can be undertaken without significant adverse impact on the integrity of the Area, and those activities which could be lawfully undertaken prior to the commencement of the Plan.

Section 56 of the Act restricts activities which result in destruction of forest products.

Policies and actions

Potentially damaging activities are listed as prohibited, in all zones. Exemptions are then provided to allow certain of these activities to be carried out according to the zone, and the circumstances under which the activities are to occur.

Table 2 summarises these provisions and sets out which activities are totally prohibited, which are allowed, and which may be allowed under permit in each separate zone.

The intention is to allow activities with an acceptable level of impact to continue but to require a permit for those activities that have the potential to harm the Area.

Priority will be given to reducing the impacts of activities lawfully undertaken prior to the Plan where these are inconsistent with the intended physical and social setting and management purpose of the zone, particularly in Zones A and B.

New structures or facilities or new activities (which would not otherwise be allowed) may be permitted in Zone B where they would result in a net reduction in impacts to the integrity of the Area. An example of this would be replacing two existing powerlines with a single new powerline which would have less impact on the integrity of the Area.

A mechanism has also been provided to allow for rezoning of parts of Zone B to Zone C to accommodate essential community infrastructure.

Table 2. Land Use Controls

- All activities, whether allowed, prohibited or permitted under this Plan, are subject to land holder or land manager permission, and the operation of other existing laws. For example, permits for vehicle access, hunting, commercial tourism activities, water extraction etc will still be issued by the relevant government land management agency.
- Many activities not proposed to be controlled by this Plan are regulated under other legislation. For example fishing is controlled under the *Queensland Fisheries Act (1994)*, hunting in national parks is controlled under the *Nature Conservation Act (1992)*.
- Co-operative management agreements can apply across all zones. Co-operative management agreements can vary the lawfulness of activities. Activities negotiated as part of a co-operative management agreement may be allowed in all zones.

Activity	Zone A	Zone B	Zone C	Zone D
Legend: Allowed: / Permit Required: P Prohibited: x				
Protection, conservation and rehabilitation of Area's natural values				
• An activity for the protection, conservation or rehabilitation of the Area's natural values undertaken by a land holder or with the land holder's permission.	/	/	/	/
• An activity on a protected area by a department responsible for managing a protected area which is consistent with national park management principles or necessary for the protection of the Area's cultural values.	/	/	/	/
Roads, vehicles and access				
• Operating a vehicle with the land holder's permission on a lawful access road for the land.				
• Operating a vehicle on a presentation (restricted) road.				
• Operating a vehicle on a road (other than a presentation restricted or management road) shown on a zoning map.	/	/	/	/
• Maintaining a structure or road.				
• Building a structure or road.	P	P	P	P
	/	/	/	/
Residential and private land holder activities				
• Waste disposal by a land holder where no public waste removal service is provided and the nearest general waste disposal facility is more than 20km away by road.	P	P	P	P
• An activity by a land holder which, if not allowed, would injuriously affect the land holder's interest in the land.	x	x	P	P
• Building a residence, access or garden.	/	/	/	/
• Building a structure (other than the above) or road.				
• Maintaining a structure or road.				
• Timber harvesting.	P	P	P	P
• Extracting water for domestic use.	P	P	P	P
• Planting, propagating etc. an undesirable plant.	x	x	P	P
	P	P	P	P
Community infrastructure				
• Operating existing legal government infrastructure.	x	x	x	x
• Building a structure or road.	P	P	P	P
• Maintaining a structure or road.	x	x	x	x
• Excavating, grading, quarrying or otherwise interfering with earth.				
• Interfering with a watercourse by extracting or diverting water, damming the watercourse or carrying out another activity that interferes with its natural flow.	/	/	/	/
• An activity which the Authority considers would have less impact on the integrity of the Area than would arise from not carrying on the activity.	x	x	P	P
• Clearing vegetation around an existing or lawfully constructed structure or road for its appropriate use.	P	P	P	P
• Clearing vegetation around an existing or lawfully constructed structure or road for its appropriate use.	x	x	P	P
• Building and maintaining a walking track.				
• Operating a waste disposal facility.				
	N/A	P	N/A	N/A
	P	P	P	P
	P	P	P	P
	x	x	x	x

Activity	Zone A	Zone B	Zone C	Zone D
Legend: Allowed: / Permit Required: P Prohibited: x				
Native title • An activity for which a person has a native title right or interest.	P	P	P	P
Recreation activities • Operating a motorised boat in a dam, in tidal waters or on Lake Barrine. (NB: Bushwalking, horse riding and bicycle riding are not regulated under the statutory Plan. Persons intending to undertake these activities should check with the relevant land manager.)	/	/	/	/
Resource use • Extracting water for domestic use. • Seed collecting. • Commercial logging. • Excavating, grading, quarrying or otherwise interfering with earth. • Interfering with a watercourse by extracting or diverting water, damming the watercourse or carrying out another activity that interferes with its natural flow. • Mining authorised under the <i>Mineral Resources Act 1989</i> . • Timber harvesting.	P P x x x	P P x x x	P P x P P	P P x P P
Farming, grazing and agriculture • Grazing animals (other than in a rainforest) if the grazing is otherwise lawful. • Beekeeping (other than in a rainforest). • Interfering with a watercourse by extracting or diverting water, damming the watercourse or carrying out another activity that interferes with its natural flow. • Transporting an undesirable animal through the Area. • Planting, cultivating etc, an undesirable plant.	/ x	/ x	/ x	/ x
Mining, quarrying or excavating • Mining authorised under the <i>Mineral Resources Act 1989</i> . • Excavating, grading, quarrying or otherwise interfering with the earth.	/ x	/ x	/ x	/ x
Fire management • Building a firebreak. • Maintaining an existing firebreak or a firebreak lawfully built under this Plan. • Burning vegetation (other than in a rainforest) if the burning is otherwise lawful.	/ x	/ x	/ P	/ P
Emergencies • An activity for the protection of life or the urgent protection of property or the urgent control of fire.	P /	P /	P /	P /
Other • An activity causing no more than minor and inconsequential impacts. • An activity lawfully carried out immediately before commencement of the Plan. • Killing or disposing of an undesirable plant. • Flying an aircraft less than 1000 ft above the Area (except in specified circumstances).	/	/	/	/
	/	/	/	/
	P x	P x	P x	P x

NB: This table is not a legal document and is not comprehensive. Anyone intending to undertake an activity in the Area should refer to the statutory Wet Tropics Management Plan 1997, or consult the Authority or the relevant land management agency.

1.7 *Decision making, permits and impact assessment*

DESIRED OUTCOME...

The desired outcome is an efficient decision-making process that is publicly accountable, integrated with other decision-making processes and includes a rigorous assessment of potential impacts on the Area.

Background information

Clear and transparent decision-making processes and rigorous impact assessment criteria and procedures are required to ensure new developments and activities or modification of facilities do not adversely affect the Area's cultural or natural environment, or produce costly management problems. Many activities which involve clearing or disturbing native vegetation do not currently require approval or consideration of their potential impact, although they could result in an unacceptable impact on the Area. Sound conservation management requires consideration of these matters.

It is essential that impact assessment guidelines and approval processes are clear, efficient, transparent, consistent and credible. Under the *Local Government (Planning and Environment) Act 1990* an environmental impact assessment (EIA) is required for most developments proposed for lands within, or having a common boundary with, the World Heritage Area. The Authority contributes (along with other government agencies) to developing terms of reference for EIAs and providing comment and advice on development proposals to local government authorities. The Authority may also provide an exemption from the need for a proponent to prepare an EIA, but does not have any power to prevent a development on neighbouring lands from proceeding. The final decision on such developments remains with the relevant local government authority.

Under Section 56 of the *Wet Tropics World Heritage Protection and Management Act 1993*, destroying a forest product (native plant) is prohibited except under a licence, permit or other authority, or unless exempted by regulation. Section 56 does not affect any rights that Aboriginal peoples may have in relation to forest products under another law. It may be necessary or acceptable in certain circumstances to allow for the destruction of native plants in order to carry on other allowed or appropriate activities (e.g. building or maintaining a walking track).

Section 54 of the *Wet Tropics World Heritage Protection and Management Act 1993* provides for the possibility of compensation in cases where restrictions or prohibitions established under this Plan injuriously affect a land holder's interest in the land (e.g. existing use). An existing use is defined as "a lawful use made, or a use that could lawfully be made as of right, of the land immediately before commencement of the management plan".

Policies and actions

Permit issuing, impact assessment and appeal processes

The Authority will prepare and distribute information to the public and relevant organisations to explain how a permit may be obtained and when environmental impact assessment may be required.

Permits required under the Plan may be issued by a decision maker (a decision maker is an agency authorised to issue permits required under this Plan). Where an activity which requires a permit under this Plan also requires a permit under another law, the agency administering the other law can issue both permits. For example, someone wishing to drive on a forestry road which is classified “presentation restricted” under this Plan will be able to obtain the necessary permits from Department of Natural Resources.

Where an environmental impact assessment (EIA) is required by a decision maker, an applicant for a permit may comply by providing an EIA that has been prepared under another Act. However, additional information may be required. Terms of reference will address all relevant criteria required for permit assessment.

Once a permit application has been received the decision maker may require more information to decide whether a permit should be issued, or what conditions should apply. This information may include details about the proposed activity, likely environmental impacts and information about alternatives. A social or cultural impact assessment may also be required. An EIA will be required where the proposed activity could have an unacceptable impact and it is reasonable to require an EIA given the significance of the proposal.

A special process has been provided for rezoning lands in zone B where Local Government considers location of community infrastructure on these lands is essential. An EIA will be a mandatory requirement in the Authority’s consideration of such applications.

The Authority will develop generic guidelines for EIA, including terms of reference. In the context of these generic guidelines, specific information requirements will be identified on a case-by-case basis.

The decision maker will be encouraged to consult with the Authority, other relevant government agencies, local government, the Scientific Advisory Committee and Community Consultative Committee, Aboriginal peoples particularly concerned with the land or any other relevant organisation or person.

Permits may include any conditions, including codes of practice, considered necessary to prevent or mitigate likely impacts upon the Area. Permits may also include conditions relating to rehabilitation and monitoring of likely impacts. A security deposit or bond may be required.

When considering whether to issue a permit for an activity (and determining any conditions which may apply), the decision maker must apply the precautionary principle and must have regard to a range of considerations, including the following:

- the likely impact of the proposed activity on the area's integrity;
- the intended physical and social setting and management purpose of the zone where the activity is proposed and those of nearby zones (particularly Zones A and B);
- whether there are any prudent and feasible alternatives;
- relevant guidelines, including those for flora and fauna conservation;
- the likely effect of the proposed activity on the scenic amenity of the Area;
- any likely effect on the land holder or native title holder for the relevant land;
- the potential effect on the amenity of the land, including aesthetic values, visitor experiences and current uses;
- the potential social, economic and cultural impact of the proposed activity;
- any potential cumulative impacts;
- the community need for the proposed activity;
- actions to prevent or minimise the likely impact of the proposed activity, or rehabilitate the Area; and
- monitoring requirements.

When deciding whether an alternative is feasible, consideration may be given to issues such as safety, health, economics, convenience, public interest and community disruption. An alternative would not be feasible if it involved unproven technology, or was impractical to implement. It would not be prudent if it would have a greater negative impact on the integrity or cultural values of the Area than the original proposal. Prudent and feasible alternatives may refer to the way of performing an activity, the proposed site or use of that site, inside or outside the Area, and the timing of the activity.

Where a permit is required for an existing use right, the Authority must have regard to how often, or with what intensity, the applicant was carrying on the activity.

The Authority will maintain a register of permit decisions that can be inspected free of charge, during business hours, at the Authority's Cairns office.

As a priority, the Authority will develop advertising and review and appeal procedures relating to decisions made under this Plan.

Appeals against review decisions under this Plan may be made to the Planning and Environment Court.

As a referral authority with the Department of Local Government and Planning, the Authority will contribute to the terms of reference and comment on completed environmental impact statements required under the *Local Government (Planning and Environment) Act 1990* for developments in the Area or on lands having a common boundary with the Area.

The Authority will establish contact with developers at the earliest opportunity to identify likely impacts on World Heritage values and any possible mitigating conditions that may be required.

The Authority will make administrative arrangements with the departments administering the *State Development and Public Works Organization Act 1971* to ensure developments occurring under this legislation have minimal impact on the Area and appropriate impact assessment takes place.

Consultation with land holders

The Authority will seek to consult with potentially affected land holders prior to placing new restrictions or prohibitions on land use and activities.

Where practical, the Authority will seek to negotiate co-operative management agreements to minimise any adverse impact of land use on the Area or Authority decisions on affected land holders.

Where a land holder in the Area voluntarily agrees to sell, the Authority will explore the option of voluntary acquisition especially where:

- restrictions or prohibitions severely constrain the land holder's options for use of the land; and
- the land has strategic importance for managing the Area.

The Authority will seek to minimise restrictions on legitimate land use in the Area where the negative impact of such uses is small.

Decision making by other agencies

To avoid duplication, where an activity requires a permit under this Plan and another State law (e.g. water extraction), the agency issuing the permit under the other law may also issue the permit under this Plan to carry out the activity, provided that the Authority agrees with the decision. Guidelines and agreements with other agencies will be developed to ensure this process operates smoothly.

1.8 Co-ordinated planning

DESIRED OUTCOME...

The desired outcome is to have management planning processes that are co-operative and complementary and contribute to achieving the Primary Goal for the Area.

Background information

Many agencies have planning and management responsibilities within or neighbouring the Area, including local government (planning schemes and local laws), the Department of Environment (plans for protected areas and species conservation), Department of Natural Resources (plans for state forests, timber reserves and water resources), Department of Defence (environmental management plans for defence training areas), Department of Main Roads (road transport planning), the Wet Tropics Management Authority (area and issue specific management plans) and the Great Barrier Reef Marine Park Authority (marine park plans). Several other Commonwealth and State agencies also contribute to planning for the Area.

The Wet Tropics Management Authority fulfills a co-ordinating role in ensuring that management planning activities are complementary and contribute to achieving the Primary Goal for the Area. This Plan provides a framework for managing the Area and developing more detailed management plans.

Policies and actions

State Government Planning

FNQ 2010 is an exercise in co-operative regional planning concerned with ensuring the economic prosperity, social well-being and environmental sustainability of the Far North Queensland region. It involves Commonwealth, State and Local Governments, as well as business, tourism, environment, development, primary production, human services and Aboriginal and Torres Strait Islander groups. These are represented on the Far North Queensland Regional Planning Advisory Committee (FNQ RPAC) which has responsibility for developing a comprehensive Regional Plan to guide growth and development of the region over the next twenty years.

The Regional Growth Management Framework (RGMF) provides an overview of the issues facing the region and sets the broad planning framework for the development of detailed strategies to meet these challenges.

The final Regional Plan for Far North Queensland will be developed through a process which integrates and reconciles the various regional strategies within the parameters established by the RGMF. The Regional Plan will contain a comprehensive and integrated set of policies, strategies and actions to realise key economic, social, environmental and urban objectives for the future development of the Far North Queensland Region.

FNQ2010 and the Wet Tropics Plan have different but complementary purposes. FNQ2010 is a non statutory plan which sets out broad regional priorities and strategies. The Wet Tropics Plan is a statutory Plan with the specific purpose of regulating activities to protect World Heritage values. Notwithstanding the different focus and legal status of the documents, it is intended that they should be mutually supportive. To help achieve this, the Authority has been an active participant in the FNQ2010 planning process, including both RPAC and the development of regional strategies for environment, waste and water management.

This Plan is intended to complement regional coastal management plans prepared under the *Coastal Protection and Management Act 1995* or detailed management plans under the *Nature Conservation Act 1992* or *Marine Parks Act 1992*.

Where there is any inconsistency between plans prepared under the *Nature Conservation Act 1992* and plans prepared under the *Wet Tropics World Heritage Protection and Management Act 1993*, the Minister for Environment will decide which plan will prevail.

The Authority will work with Department of Main Roads and local government to ensure transport planning and conservation planning are complementary and contribute to the Primary Goal.

Management planning processes (e.g. advertising, public comment) should be integrated where more than one agency has planning responsibilities for a particular part of the area.

Local government planning

The Authority will contribute to any reviews of local government planning schemes in accordance with the *Local Government (Planning and Environment) Act 1990* and the proposed Integrated Planning Act.

The Authority will assist local government, Aboriginal community councils and Aboriginal organisations with their planning activities to ensure World Heritage values are adequately protected.

Where there is inconsistency between a management plan prepared under the *Wet Tropics World Heritage Protection and Management Act 1993* and a local government planning scheme, the Wet Tropics Plan prevails over the planning scheme to the extent of the inconsistency. Any inconsistencies detected would be dealt with in co-operation with the local government concerned.

As opportunities arise during the normal review process, local government planning schemes should be amended by the relevant local government to ensure consistency with statutory plans prepared under the *Wet Tropics World Heritage Protection and Management Act 1993*.

Local Governments may apply to have the Wet Tropics Plan amended should the need arise to place critical community infrastructure in areas currently zoned B. The amendment process will involve public exhibition of an EIS and approval from the Wet Tropics Ministerial Council.

Area-specific management plans

More detailed management plans can be developed under the Act. They could include either area specific or issue specific management plans. Area specific management plans are proposed to deal with issues at a more local level than the regional Wet Tropics Plan. Under s.52 of the Act these management plans can amend the Wet Tropics Plan.

Priorities for preparation of area-specific management plans will be developed by the Authority in consultation with the Department of Environment, Department of Natural Resources and local government.

Where practical and appropriate, the intent of management strategies developed by other government agencies will be incorporated into area-specific management plans prepared for parts of the Area (e.g. coastal management plans, environmental management plans for defence areas, transport plans etc.).

Community Involvement

Agencies undertaking planning activities should consult with the Authority, relevant government departments, Aboriginal peoples, tourism industry, private landowners and managers in and adjacent to the Area and other stakeholders during the development of management plans, regulations and policies. Aboriginal communities should be provided with an opportunity to decide how they wish to be involved in each planning process.

Planning co-ordination groups should be established where practical. The development of draft management plans should include community consultation, even where this is not formally required under legislation.

The Authority will liaise with other agencies to ensure consistency between this Plan and more detailed plans.

Regulatory planning controls will be kept to the minimum required to support achievement of the Primary Goal for the Area.

1.9 Land tenure

DESIRED OUTCOME...

The desired outcome is to have tenure in the Area managed to afford the greatest protection of World Heritage values.

Background information

The Wet Tropics World Heritage Area comprises a variety of land tenures including freehold, leasehold, unallocated State land, State forest, timber reserve and national park. World Heritage listing does not affect land ownership. State and local laws still apply. Land management agencies are still responsible for issuing permits on land under their control (e.g. Department of Natural Resources is still responsible for issuing permits to traverse State forest).

Land tenure and associated use rights (e.g. the right to clear land) have significant implications for management of the Area. Different land tenures provide different levels of conservation protection. The Authority encourages the conversion of land tenure to achieve a higher order of protection (e.g. to national park), where opportunities arise. This could be achieved where private owners offer parcels of land for sale, leases or permits expire or are renewed, or where Crown tenures on particular parcels of land change (e.g. transfer of State forests or timber reserves to national park).

Policies and actions

The following policies do not alter existing legal provisions for acquisition of interests in land for public purposes, or any entitlements to compensation which may exist under law.

When tenure changes, its conversion to a higher order of protection is preferred. Lands acquired for World Heritage management should be added to the Area at the first available opportunity.

Transfer of ownership of leasehold or privately-owned land will not be restricted. However, the creation, subdivision or extension of privately-owned or leased land tenure in the Area is generally not supported. Exceptions may include:

- recognition of native title rights over native title land;
- tenures over land vested in Aboriginal communities under the *Aboriginal Land Act 1991*, *Aboriginal and Torres Strait Islander (Land holding) Act 1985* and the *Community Services (Aborigines) Act 1984*;
- where the new tenure will not adversely affect, or will positively contribute to the Primary Goal; and
- additions to the Area.

Where lease interests in the Area expire or revert to the Crown through other means, it is recommended that the land be incorporated into protected areas (provided this would not affect native title). Department of Natural Resources is the lead agency for tenure administration in Queensland. Renewal or conversion of tenure will ultimately be decided by Department of Natural Resources. The Authority will provide advice to Department of Natural Resources on the sustainability of land management practices.

Acquisition priorities for lands within or adjoining the Area will be developed by the Authority in consultation with the Department of Environment. Where funds are available acquisition priority will be given to purchases which contribute to:

- protection, conservation and rehabilitation of World Heritage values, especially where threatened;
- sound management of the Area;
- presentation of the Area, particularly key sites for visitor facilities; and
- resolution of undesirable land tenure and Area boundary anomalies.

The Authority will:

- maintain an accurate directory of land holdings within the Area, including use rights and permit or licence conditions;
- work with the Department of Natural Resources, local government and other relevant agencies to develop a process for formal notification of any proposed creation, subdivision or extension of private land tenure in the Area;
- review proposals to change the status of land or use rights in relation to World Heritage management considerations; and
- work with land managers to resolve undesirable inconsistency between official land use rights (such as the conditions of a permit, lease, licence or other legal authority) and actual land use.

1.10 Boundary management

DESIRED OUTCOME...

The desired outcome is to have boundaries managed for the protection of World Heritage values based on ecological considerations, but also recognising the needs of land holders and neighbours.

Background information

There are more than 2500 individual blocks of land neighbouring the Area's 3000 kilometre boundary. Whilst the statutory plan applies within the World Heritage Area only, working co-operatively with neighbours can help minimise impacts on the Area of adjacent land uses, including residential and farming activities and, conversely, help minimise impacts and maximise benefits of the Area for neighbours. Neighbours can play an important role in achieving the objectives of the Primary Goal in a co-operative manner.

Fences are a particularly important concern for boundary management. While fences may be necessary to control stock or feral animals, provide security, define a boundary or control visitors, they can impact on World Heritage values. They can interfere with natural wildlife movements, destroy natural vegetation and habitat during clearing along fence lines and degrade the scenic qualities of an area.

Policies and actions

This Plan places no constraints on any lands outside the World Heritage Area. However the Authority promotes good neighbour policies, such as those prepared by the Department of Environment, which provide guidelines for fencing and other boundary management issues.

The Authority supports the use of co-operative management agreements and conservation agreements with land holders, Aboriginal peoples and other parties within and outside the Area as a means of giving the greatest possible effect to the Primary Goal and minimising impacts upon neighbours.

The Authority will undertake a review of the Area boundary, focusing on identifying edge effects, encroachments, undesirable anomalies and opportunities for co-operative management of boundaries.

To facilitate good relations with neighbours, the Authority will liaise with land holders in and adjacent to the Area over the location and impacts of fencing, and options for co-operative management agreements. Preference will be given to relocating fences along ecological boundaries rather than cadastral boundaries where the outcome is mutually beneficial to land owners and the Authority.

1.11 Native title

DESIRED OUTCOME...

The desired outcome is recognition of native title rights consistent with Australian law and Australia's obligations under the World Heritage Convention.

Background information

On 3 June 1992, the High Court of Australia rejected the doctrine that Australia was terra nullius (land belonging to no-one) at the time of British settlement and recognised the existence of native title. Native title is a term used to describe the rights and interests of indigenous people over land and water in accordance with their traditional laws and customs. Without limiting what might comprise native title, native title may include hunting, gathering, or fishing rights and interests. It may also include rights akin to exclusive possession, similar to freehold.

Native title may continue to exist today across a variety of land tenures.

In order to validly regulate native title rights, the Wet Tropics Plan must comply with the Commonwealth *Native Title Act 1993* and the *Native Title (Qld) Act 1993*. This Plan is a permissible future act under the Commonwealth *Native Title Act 1993*, as it ensures that native title holders are not more disadvantaged at law than ordinary title holders.

Unlike the rights of private land (ordinary title) holders, the nature, extent and location of the rights of native title holders is currently unknown to many people. A mechanism is required to ensure that native title holders are not therefore unfairly disadvantaged in comparison with freehold title holders before the process of native title determination is completed.

In some circumstances, the exercising of native title rights may be inconsistent with Australia's obligations under the World Heritage Convention to protect World Heritage values. The Authority recognises that the exercise of native title rights also has the potential to enhance the conservation of World Heritage values.

Policies and actions

Should any part of this Plan invalidly affect native title, that part of the Plan will be unenforceable to the extent of its inconsistency with native title.

In implementing this Plan, the rights and interests of native title holders will be treated according to Commonwealth and State laws and the common law and will be dealt with in a fair and racially non-discriminatory manner.

Under the provisions of the Plan, native title holders may obtain a permit to do any activity which is part of their native title right (even if this activity is otherwise prohibited).

In cases where there is no registered native title holder, permit applications relating to native title rights or interests will be referred to the State Government's lead agency for native title, for advice on the status of native title interests.

Under the proposed regulatory provisions of the Wet Tropics Plan, the rights of native title holders to carry out activities are at least equivalent to those of private land holders. This includes the rights to carry out activities that were being lawfully carried out immediately before commencement of the final Plan. In circumstances where a native title holder wishes to undertake an otherwise illegal activity which is not directly a part of their native title rights, a co-operative management agreement may be negotiated between the Authority, native title holders and other relevant parties to vary the extent to which some provisions of the statutory Plan apply. Any such co-operative management agreement must be consistent with the protection of World Heritage values as required by Australia's obligations under the World Heritage Convention.

Native title holders in the Area will be encouraged to protect World Heritage values by developing co-operative or joint management agreements with the Authority or by preparing area-specific management plans with the Authority under the *Wet Tropics World Heritage Protection and Management Act 1993*, or with the Department of Environment under the *Nature Conservation Act 1992*.

Prior to transmission to the Governor in Council for final approval, all Wet Tropics management plans will be reviewed to ensure they are permissible future acts under the Commonwealth *Native Title Act 1993*.

When implementing, preparing or reviewing management plans for the Area, particular attention will be given to the developing law of native title and the capacity for native title rights to change with time.

Where all parties agree, area-specific management plans may be prepared in consultation with potential native title holders for claimed areas during the Native Title Tribunal mediation process.

The Authority may enter into co-operative management agreements (including the development of management plans) with native title holders at any time, including after lodgement of an application for determination of native title.

The Authority will also seek active involvement in the mediation process where lands in the World Heritage Area are involved. This is considered the most effective way to avoid later debates about the expression of native title rights.

1.12 Education

DESIRED OUTCOME...

An informed community with a good understanding of the values of the Area, the meaning of World Heritage listing, the current threats to the integrity of the area and the current state of knowledge about how to mitigate impacts on the Area's natural values.

Background information

A well designed environmental education programme can be one of the most important methods of management available to the Authority and land managers. A community which is well informed of the natural, cultural and economic values of the Area and aware of how certain activities and processes could threaten those values is more likely to be supportive of management activities.

Community attitude surveys conducted by the Authority have indicated that community support for and understanding of the Wet Tropics World Heritage Area have been increasing since the Area was listed. This increased support suggests public acceptance of the listing and a growing awareness of the community benefits which flow from it.

Tourism operators conducting tours within the Area fulfil an important role in raising awareness of the natural and cultural values of the Area.

Policies and actions

The Authority has identified the following priorities for education:

- a program to encourage community understanding of the values of the Area, the meaning of World Heritage listing, the current threats to the area posed by human activities, and the benefits which the community derives from the Area;
- educational and interpretive materials designed to inform the community about the current state of knowledge regarding management practices and other solutions available to minimise impacts on the Area (e.g. feral pig control, tourism, etc.);
- support for voluntary groups, such as conservation organisations, to ensure educational and interpretive material has a wide distribution and that interpretive information is available to local residents;
- programs that enhance the skills of land holders and the wider community in partnership approaches to management of the Area;
- educational and interpretive materials highlighting the contribution of Aboriginal peoples to planning and management of the Area;

- a program to encourage community understanding and support for sustainable traditional use of the forests;
- a monitoring program to assess the effectiveness of education and interpretive programs; and
- initiatives which contribute to the ability of tour operators to increase understanding of the natural and cultural values of the Area.

Promotional, interpretive and educational material relating specifically to Aboriginal places must be endorsed by the traditional custodians prior to use. Where possible, Aboriginal peoples should be involved in on-ground management of cultural heritage.

1.13 Implementation

DESIRED OUTCOME...

The desired outcome is to have an effective and accountable system for implementing the Plan.

Background information

Implementation of the Wet Tropics Plan will be seen as a demonstration of Australia's commitment to its international obligation under the World Heritage Convention.

Consistent with the Protection through Partnerships principles there are many agencies and land holders with responsibility for implementing the Plan. They include the Authority, Queensland's Departments of Environment, Natural Resources, and Main Roads, the Commonwealth Department of Defence, and local governments in the wet tropics region (including Aboriginal councils), Aboriginal organisations with land management responsibilities, and private land holders. Environment Australia takes a strong policy interest in the management of the Area. The success of the Plan also depends on the support of land holders, Aboriginal groups, special interest groups and community members throughout the region.

The Authority, land holders, land managers and the community need to know if the Plan is achieving its stated goals and desired outcomes or if management activity needs modification to better meet these outcomes.

Policies and actions

An implementation strategy will be developed annually by the Authority in conjunction with agencies and groups with implementation responsibilities. The strategy will need to be flexible to account for changes in available resources and priorities. The implementation strategy will include:

- a priority list of tasks to be undertaken (i.e. an action plan);
- the agency responsible for each task;
- indicative capital and recurrent funding required to perform each task; and
- a three-year rolling program for forward commitments.

In developing the implementation strategy, consideration must be given to the results of reporting and evaluation activities (see section 2.13), research and monitoring activities and success of the previous year's implementation strategy.

The implementation strategy will include performance indicators. It will be developed and executed within the context of a three-year indicative budget. Where appropriate, agreements (e.g. memoranda of understanding) may be developed to formalise implementation responsibilities between the Authority and other agencies.

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2.0 *Conserving the Wet Tropics Area*

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2.1 *Flora and fauna conservation*

DESIRED OUTCOME...

The desired outcome is to have all plant and animal communities and species managed according to their conservation requirements. Vulnerable communities and species and areas of special value may require special attention.

Background information

Conserving the flora and fauna of the Area is necessary to achieve the Primary Goal. Different plant and animal communities have different management requirements and the impact of activities such as linear clearings, canopy disturbance, fire and introduced animals will vary accordingly. Conservation strategies for the management of threatened species and communities must centre around habitat protection and the abatement of threatening processes. Threatened species, their natural habitats, and threatened ecological communities require special measures if they are to survive. The aim of management is to protect the whole diversity of natural values and to maintain ecological processes and systems. Effective repair and rehabilitation of degraded areas will also provide valuable support for the conservation of the Area's natural values.

Flora and Fauna Conservation Guidelines have been developed to help ensure management activities are consistent with the conservation requirements of biological communities. The guidelines, set out in Table 3, have been based on the best available knowledge of the conservation requirements of plants and animals in the Area.

Policies and actions

When considering whether to issue a permit for an activity (and determining any conditions which may apply), the decision maker must have regard to the information in the Flora and Fauna Conservation Guidelines.

The guidelines will also be taken into account when developing management codes of practice.

Management codes of practice should include rehabilitation and revegetation provisions, in accordance with the guidelines.

Activities such as hunting with dogs, fish stocking and grazing, other than in areas with existing use rights, are not generally appropriate, for the conservation of flora and fauna.

Updated Flora and Fauna Conservation Guidelines will be published as new or better information is obtained regarding species and habitat conservation requirements. In particular, emphasis will be given to incorporating Aboriginal ecological knowledge in determining conservation requirements.

Guidelines for maintenance of infrastructure, roads, service corridors and access tracks

Linear clearings and associated activities can have particularly damaging effects on wildlife.

The objective with regard to the maintenance of infrastructure, particularly service corridors and access tracks, is to eliminate as far as is practicable any deleterious impacts on ecological processes and systems. Maintenance and use of roads and powerline clearings can impact on native wildlife in the following ways:

- fragmentation and barrier effects impinging upon the processes of plant and animal dispersal, gene flow and animal behaviour. As the width of linear clearings increases, crossing attempts by many species decline until they form a complete or almost complete barrier. Arboreal and rainforest understorey species are most likely to be adversely affected;
- edge effects including the alteration of microclimatic conditions and the introduction of generalist species capable of invading and colonising disturbed habitats;
- road deaths;
- landscape instability, erosion, sedimentation and altered stream flow characteristics;
- visual, acoustic and mechanical stimuli such as noise, vibration, movement, dust, headlights, exhaust fumes and human presence.

Table 3 Flora and Fauna Conservation Guidelines

Information	Guideline
Threatened species and communities	
Closed forest areas contain or comprise the habitats of: endangered or vulnerable species; ecological communities; nodal areas for officially listed rare rainforest plant species; or rare arboreal specialist fauna species. The integrity of these areas can be threatened by canopy or understorey disturbance.	<ul style="list-style-type: none"> • Prevent new canopy or understorey disturbances and reduce extent of existing disturbances as and when the opportunity arises.
Open forest areas contain or comprise the habitats of: endangered or vulnerable species of open forest flora or fauna; endangered or vulnerable open forest ecological communities; or nodal areas for officially listed rare open-forest plant species. The integrity of these areas can be threatened by canopy clearings and inappropriate fire regimes.	<ul style="list-style-type: none"> • Prevent new canopy clearings. • Develop appropriate fire management regimes adopting a cautious approach involving variable regimes until impacts and role in vegetation management are better understood.
Aquatic and swamp areas contain or comprise the habitats of: endangered or vulnerable species of water dependent/aquatic flora or fauna; or endangered or vulnerable highly water dependent ecological communities. These areas require the maintenance of water quality and quantity, and hydrological processes.	<ul style="list-style-type: none"> • Maintain water quality and quantity. • Maintain hydrological processes including flow and drainage patterns and pathways.
Boulder fields and rock pavements contain or comprise the habitats of: endangered or vulnerable species of rock dwelling flora or fauna; or highly restricted endemic or rare rock-specialist species of flora or fauna. The integrity of these areas can be threatened by disturbance to boulder fields or rock surfaces, and trampling.	<ul style="list-style-type: none"> • Prevent disturbance to boulder fields or rock surfaces. • Avoid potential impacts of trampling.
Wide-ranging endangered or vulnerable faunal species with large home ranges (such as the cassowary and several bat, raptor and owl species) can be threatened by any disturbance to their critical habitats.	<ul style="list-style-type: none"> • Avoid disturbances adversely impacting on viability of threatened fauna with large home ranges which utilise a variety of habitats. • Focus particular attention on identifying critical habitats and areas of major interest for wide-ranging threatened faunal species, as provided for in the <i>Nature Conservation Act 1992</i>.
Vulnerable species and communities	
Newly discovered plant or animal species; plant or animal species pending classification under the <i>Nature Conservation (Wildlife) Regulation (Qld) 1994</i> or the <i>Endangered Species Protection Act (Comm) 1992</i> ; officially listed rare species of flora or fauna; or disjunct rare species nodes, are vulnerable to any form of new disturbance.	<ul style="list-style-type: none"> • Focus Avoid any form of new disturbance.
Areas of particular evolutionary importance including: areas of a refugial nature; centres of endemism; primitive species nodes; monotypic genera nodes; or important inter-regional common species disjunct nodes are endangered by fragmentation and the creation of ecological barriers. Such areas require ecologically functional linkages within and between nodal areas to maintain natural ongoing evolutionary processes. Locally adapted populations of widespread species (ecotypes) show minor changes of morphology and/or physiology which are related to habitat and are genetically induced.	<ul style="list-style-type: none"> • Maintain ecologically functional linkages within and between nodal areas. • Avoid fragmentation and the creation of ecological barriers. • Take special care in sourcing propagating material for any planned rehabilitation works, including consideration of locally adapted populations of widespread species (ecotypes). • Avoid interrupting the potential for natural ongoing evolutionary processes.

Poorly known areas	
Closed forest areas <u>not</u> currently recognised nor identified as containing or comprising habitats of rare or threatened species or evolutionarily significant species can still be impacted adversely by linear clearings.	<ul style="list-style-type: none"> Minimise linear clearings. If there are no prudent and feasible alternatives, linear clearings may be permitted but should be kept as narrow as possible and not exceed 8 metres.
Open forest areas <u>not</u> currently recognised nor identified as containing or comprising habitats of rare or threatened species or evolutionarily significant species can still be impacted adversely by linear clearings and inappropriate fire management regimes.	<ul style="list-style-type: none"> Minimise linear clearings Develop appropriate fire regimes. If there are no prudent and feasible alternatives, linear clearings may be permitted but should be kept as narrow as possible and not exceed 15 metres.
Specific species	
The Golden Bowerbird is vulnerable to disturbance particularly in the breeding season (August to December).	<ul style="list-style-type: none"> Manage visitor access to bowers, particularly in the breeding season.
Arboreal species require canopy connectivity which requires the maintenance of potential crossing points above roads.	<ul style="list-style-type: none"> Maintain canopy connectivity above roads wherever possible, to provide potential crossing points.
The Blue-faced Parrot Finch requires small grassy clearings in upland areas.	<ul style="list-style-type: none"> In upland areas, retain any small grassy clearings utilised by the Blue-faced Parrot Finch.
The Boyd's Forest Dragon breeds in nests from late November to late February and is then particularly vulnerable to disturbance.	<ul style="list-style-type: none"> Avoid maintenance activities to road verges which involve soil disturbance or chemicals, particularly from late November to late February.
The Spotted-tailed Quoll has important populations in the Mt Windsor Tableland area which are vulnerable to invasion by Cane Toads.	<ul style="list-style-type: none"> Take any action necessary to prevent the invasion by Cane Toads of the Mt Windsor Tableland.
Threatened faunal species can be disturbed or killed by introduced and domestic animals such as dogs.	<ul style="list-style-type: none"> Prohibit dogs, including hunting with dogs.
Species used for revegetation and remedial activities have the potential to become environmental weeds and should be carefully selected to avoid this.	<ul style="list-style-type: none"> Select species used for revegetation and remedial activities with care to avoid species which may become environmental weeds.
Specific habitats	
Aquatic habitats require maintenance of natural water quality, quantity, seasonality and environmental flows.	<ul style="list-style-type: none"> Consider potential impacts on the quality, quantity, seasonality and environmental flows of aquatic habitats.
Rare underground/subterranean habitats such as caves are unusual in the World Heritage Area and require careful management.	<ul style="list-style-type: none"> Consider potential loss of these habitats.
Summit habitats, including restricted mountain-top habitats with high levels of endemism, are often very slow to recover from disturbance.	<ul style="list-style-type: none"> Avoid any activities which disturb these habitats.
Open forest areas require appropriate burning practices.	<ul style="list-style-type: none"> Develop appropriate burning practices. In the absence of sufficient knowledge, adopt a cautious approach involving variable regimes.
General Information	
Faunal species, particularly arboreal, understorey and litter species, are vulnerable to cumulative effects on fragmentation of their habitat.	<ul style="list-style-type: none"> Consider the cumulative effects of habitat fragmentation on faunal species, particularly arboreal, understorey and litter species.
Pathogens such as <i>Phytophthora cinnamomi</i> pose a significant threat to the integrity of forested areas.	<ul style="list-style-type: none"> Consider hygiene requirements, in all areas and for all activities, to avoid spreading or introducing pathogens.
Maintenance works risk the introduction and spread of alien species.	<ul style="list-style-type: none"> Control introduction and spread of alien species. Wherever possible, areas impacted by introduced plant species should be repaired and rehabilitated to restore natural values.
Construction and maintenance activities may impact the natural values, particularly where inadequate provision is made for geotechnical constraints imposed by geological substrate, soil characteristics and slopes.	<ul style="list-style-type: none"> Consider geotechnical constraints in all construction and maintenance activities.

2.2 Biodiversity

DESIRED OUTCOME...

The desired outcome is to have all species and ecological communities within the Area surviving and thriving according to their natural patterns of distribution and relative abundance levels, and retaining their genetic diversity and potential for evolutionary development.

Background information

Biodiversity is the term used to refer to the variety of living things. It includes the number of ecosystems, species or genes in a given assemblage and encompasses all species of plants, animals and micro-organisms and the ecosystems and ecological processes of which they are part. The Area is a recognised centre of outstanding biological diversity without equal on the continent and contains elements that relate to eight major stages in the Earth's evolutionary history. It provides an unparalleled living record of the ecological and evolutionary processes that shaped the flora and fauna of Australia over the past 415 million years, when first it was part of Pangaea, then Gondwana and now the present island continent. It contains some of the most important and significant habitats for in situ conservation of biological diversity, including those containing threatened species.

The Area includes habitat for half of Australia's bird species, 36% of our mammals and 60% of our butterflies. About 3000 plant species from 210 families occur here, representing about 17% of Australia's vascular plants. More than 700 of these species, or 23% of the total, are endemic (that is, found only in the wet tropics region). Of particular conservation importance are the primitive flowering plants. Their evolutionary history was an essential component of the World Heritage nomination. Of 19 families of angiosperms recognised worldwide as primitive, 12 are found in the Area, and two of these are confined to the Area (for further information please refer to "Wet Tropics in Profile" published by and available from the Authority).

Research within the Area is increasing as its scientific significance is becoming better understood. Several initiatives, including the Co-operative Research Centre for Tropical Rainforest Ecology and Management, research by the Department of Environment, the Authority's Scientific Research Grants Program and the ambitious Project Gondwana (Wet Tropics Biophysical Inventory Project), aim to acquire scientific knowledge relevant to management of the Area. Ongoing, well-supported research is fundamental to the Area's management. All available relevant information is being incorporated into the Authority's computer-based geographic information system (GIS), which will aid the integrated management of species and habitats on lands of all tenures in the Area.

Policies and actions

Management decisions that impact on the flora and fauna are to be guided by information in the Flora and Fauna Conservation Guidelines (see section 2.1) and should take into consideration any processes which may pose a threat. Introducing potentially threatening processes is inappropriate. Methods used by land managers to reduce current threats and enhance habitat integrity may include:

- closure or narrowing of clearings around roads, service and infrastructure corridors and facilities that are no longer required (safety of the travelling public is an important consideration here);
- reducing fragmentation effects by providing habitat links (e.g. canopy closure);
- locating high visitor-use sites in less sensitive areas;
- introducing and continuing species-specific and site-specific fire management regimes;
- implementing control programs for exotic species (feral animals and weeds);
- investigating alternative activities or sites outside the Area for water supply, extraction and impoundment, service corridors and facilities; and
- preparing conservation plans under the *Nature Conservation Act 1992*, conservation management agreements and input into local government strategic plans.

If a proposed development activity may be a threat to World Heritage values, particularly to species or habitats considered vulnerable, or its impact is unknown, a precautionary approach based on best available knowledge will be adopted.

The co-operation of land holders and relevant agencies outside the Area will be sought in an effort to reduce threats originating outside the Area.

Processes and categories of activities that have, or are likely to have, significant adverse impacts on the conservation of biological diversity will be monitored and regulated, and adverse impacts minimised or eliminated wherever possible.

As far as practicable disturbed areas will be repaired and rehabilitated to restore their biological diversity.

Successful restoration of biodiversity and rehabilitation of degraded systems will require continuing research into the collection and propagation of native species for use in rehabilitation programs.

Research into conservation requirements should be directed at all levels of biological activity, including species, habitats, communities, populations and landscapes.

Priority in terms of funding or other support will be given to systematic surveys and inventories of plants and animals to augment present knowledge, particularly with regard to, but not limited to, evolutionary relationships of the local and endemic species, poorly known areas, communities and taxonomic groups or species which are rare, threatened, primitive and/or endemic.

Scientific research in areas of critical importance for management will be encouraged through bodies such as the Co-operative Research Centre for Tropical Rainforest Ecology and Management, government research organisations and higher education institutions.

Culturally appropriate research with or by Aboriginal people, focused on traditional ecological knowledge and its relevance to conservation management, will be encouraged. Encouragement and support will be given to the participation of Aboriginal people in other areas of scientific research being undertaken.

Where culturally appropriate, traditional Aboriginal knowledge of plants and animals should be considered in determining conservation requirements and management responses.

Advice on the impact of planning policies and developments, based on the best available scientific knowledge, will be provided and co-ordinated across government agencies, as required.

The Authority, in conjunction with land managers, will:

- maintain and enhance its geographic information system and associated databases and develop other decision support tools and information systems for planners and managers, based on ongoing research;
- distribute information from research surveys to land managers and other user groups as soon as practicable and encourage conservation measures based on this information;
- provide specialist advice on ecological and related environmental issues and assessments;
- identify and monitor the Area's natural and cultural resources and ensure planning and management practices protect and sustain their quality and values;
- encourage projects aimed at assessing the types and levels of impacts and the actions necessary to maintain and, where appropriate, enhance biological diversity;
- encourage research into the population dynamics and effective control of pest species; and
- monitor the effects of pest control programs and modify those that have adverse side effects on biological diversity.

The Authority will seek advice from the Wet Tropics Scientific Advisory Committee and review management policy or practice where research reveals a need for change in species management or any species is determined to be under immediate threat of extinction.

2.3 *Plant communities*

DESIRED OUTCOME...

The desired outcome is to have a diverse range of plant communities free from non-natural threatening processes.

Background information

The Area includes rainforest and non-rainforest communities, including Melaleuca forests and other sclerophyll vegetation complexes, and mosaics of rainforest, paperbark, swamp and sand-ridge communities.

The world's highest concentration of primitive flowering plant families occurs in the Area. These include remnants of an evolutionary stream of warmth-adapted flora that originated in the forests of Gondwana up to 100 million years ago. The Australian rainforests are regarded as the cradle for most of the continent's dry-adapted flora and fauna and many of the nearest surviving relatives of the ancestral stock from which this flora and fauna evolved are contained in the Area. Evidence from 25 million year old fossils in the Riversleigh World Heritage Area shows clear connections between the fauna of the rainforests of that period and those occurring in the Area today.

Among the plants, the most primitive members of the family Proteaceae are found only in the wet tropics region. Having originated as rainforest types in Australian Gondwana, this family forms a major part of the dry-adapted flora that now dominates the Australian landscape, including the Banksias, Grevilleas and Hakeas.

Rainforest communities require careful management which takes into account the conditions under which they evolved and more recent impacts. Fires, change in the water table and disturbance-related weed invasions can impact on particular rainforest types. Disturbance of canopy or understorey vegetation can have long-term effects upon those rainforest communities which survive in low nutrient beach sands, extremely shallow soils or in drier conditions. Such communities may be very slow to recover from disturbances or may not recover at all.

Much of our open forest flora and fauna has evolved with fire, and may rely upon particular fire regimes for continued survival. In recent times, however, the timing, frequency and intensity of these fires has changed. Although fire is a necessary part of many open forest ecosystems, it can also be damaging. Inappropriate fire regimes can lead to loss of native species, communities and ecosystems. Burning can promote invasion by weeds which alter fuel loads, sometimes leading to rapid increases in fire hazard. It is important that guidelines are developed for prescribed burning practices in the Area that take account of the fire responses of different ecosystems, natural patterns of succession, and the role of fire in the maintenance of biological diversity.

Thorough scientific research is needed to establish fire management regimes to help ensure the long-term viability of the tall open forests.

Intensive development in the lowlands has reduced the non-rainforest communities to remnant and threatened stands, the majority having been cleared, fragmented or influenced by draining for agriculture. These communities, which are variously dominated by species of Eucalyptus, Melaleuca and Acacia with a heath or sedge grass and herb ground layer, constitute the habitat of species such as the endangered Mahogany Glider (*Petaurus gracilis*), as well as some rare or threatened plant taxa, and are important habitat components of the endangered Cassowary (*Casuarius casuarius*).

Policies and actions

Conservation and rehabilitation activities should focus on rare communities, especially those at particular risk from disturbance.

A review of management policies and priorities will be initiated where research indicates that management efforts are in-effective in conserving the diversity of vegetation communities.

Except where absolutely necessary for the long-term survival of species or communities, no action will be taken to ameliorate the impacts of natural disturbances (e.g. cyclones, floods).

Rainforest communities

A high priority will be given to management which ensures the survival of the extremely rare rainforest community types within the Area, such as:

- 2b (Mesophyll Vine Forests on beach sands);
- 3a (Mesophyll Vine Forest with dominant Feather Palms);
- 3b (Mesophyll Vine Forest with dominant Fan Palms);
- 5b (Complex Notophyll Vine Forest);
- 7a (Notophyll Vine Forest on metamorphic soils in dry coastal lowlands);
- 7b (Notophyll Vine Forest on calcareous sands);
- 25 (Notophyll Vine Forest with Hoop Pine); and
- 26 (Low Microphyll Vine Forest, often with Hoop Pine).

NB. All forest classifications are based on those devised by Tracey (1982).

A high priority will be given to management which ensures the survival of the relatively rare rainforest communities with less than one-third of their total in the Area, such as:

- 4 (Semi-deciduous Mesophyll Vine Forest); and
- 11 (Deciduous Microphyll Vine Thicket).

A high priority for active conservation and rehabilitation measures will be assigned to rainforest communities at high risk of disturbance from fires, drainage and pest and weed infestation.

Management of all rare rainforest communities should consider the ability of each community to recover from different types of disturbance.

When considering whether to issue a permit for an activity (and determining any conditions which may apply), the decision maker must have regard to the need to protect the habitats of rare and threatened species.

Co-operative management agreements will be sought with land holders with regard to the management needs of ecological communities within and adjacent to the Area.

The Authority will undertake research and accurate mapping of rare rainforest communities within or adjacent to the Area to identify and evaluate their integrity, conservation status and any possible threats. Where it is desirable to undertake research on private land, land holder consent will be sought.

Where possible, land holders will be provided with assistance to protect natural values on their land.

Non-rainforest communities

Conservation and rehabilitation of tall open forests and the under-represented lowland complexes and mosaic community types, particularly the rare type 18, are high priorities. These types are:

- 17 (Complex of vegetation types on coastal beach ridges and gullies);
- 18 (Complex of vegetation types on swampy coastal plains);
- 19 (Complex of vegetation types on coastal flood plains and Piedmont slopes);
- 20 (Complex of vegetation types dominated by stunted Paperbark forests on soils with impeded drainage); and
- 14a (Tall open forest on cloudy moist uplands and highlands on granites and acid volcanics).

The Authority will encourage research into the fire history of the tall open forests, including Aboriginal practices and post-European settlement practices, and their impacts upon the forest community.

The Authority will:

- promote research designed to establish management requirements for conservation of the lowland vegetation complexes, particularly forest dominated by *Melaleuca* species;
- promote research relating to the role of fire in maintaining or modifying habitat diversity, and the ecological effects of fuel-reduction burning;
- develop guidelines for prescribed burning practices that take account of the fire responses of different ecosystems, natural patterns of succession, and the role of fire in the maintenance of biological diversity; and
- seek co-operative management arrangements with land holders to address the management needs of non-rainforest communities within and adjoining the Area.

2.4 Rare, threatened and evolutionarily significant species

DESIRED OUTCOME...

The desired outcome is to have rare, threatened and evolutionarily significant species and habitats in the Area conserved and their security assured by controlling non-natural threatening processes.

Background information

The Area contains the most complete and diverse living record of the evolution of land plants. Surviving remnants of the ancestral stock from which most Australian plants evolved are present here and the rainforests represent a unique mixture of ancient and recent flora, including some rare elements. Rainforest communities which had their origins in the forests of the former supercontinent, Gondwana, are thought to have survived in small wet areas (refugia) during the ice ages when reduced rainfall allowed drier forests to expand. Several such refugia are believed to have existed on mountain summits and very wet valleys where today there is a high concentration of primitive plants and endemic species.

There are many species within the Area known to be threatened or declining and which may require management intervention to ensure their survival in the wild. Examples of some highly vulnerable species are:

- highly localised, endemic rainforest plant species, especially in the Daintree-Cape Tribulation lowlands, and in heavily fragmented lowland forests;
- upland rainforest stream-dwelling frogs, which have rapidly declined for unknown reasons;
- Mahogany Glider (*Petaurus gracilis*), now confined to open forest remnants in the Tully-Ingham area;
- Yellow-bellied Glider (*Petaurus australis reginae*), restricted to scattered tracts of tall open (wet sclerophyll) forest fringing the western margin of the Area;
- Tropical Bettong (*Bettongia tropica*), confined to a few small populations in wetter open forest;
- Moth Orchid (*Phalaenopsis rosenstromii*), found in geographically separated lowland gorges;
- Cassowary (*Casuarius casuarius*), sparsely distributed in parts of the Area; and
- Lake Eacham Rainbow Fish (*Melanotaenia eachamensis*), which is extinct from Lake Eacham, but still occurs in restricted distributions which are under threat.

The best available information has been used to develop the Flora and Fauna Conservation Guidelines set out in Table 3. The most vulnerable species usually have highly restricted distributions or occur at low population densities. A frequent cause of decline is the destruction, fragmentation or degradation of critical habitats.

The Department of Environment administers the *Nature Conservation Act 1992* and is the lead agency in Queensland for the conservation of rare and threatened species. Statutory conservation plans may be prepared under this Act for the management of species or groups of species. Threat abatement plans are designed to reduce threats to highly vulnerable, threatened or endangered species pending development of species recovery plans or conservation plans. Some successful examples include the construction of cassowary bridges over drains; installing artificial den sites for possums where some habitat destruction has occurred; and the construction of pig exclosures around rare and threatened plant species.

The recovery of endangered species is provided for under the Commonwealth's *Endangered Species Protection Act 1992*, administered through the State. Protected wildlife and the declared management intent for each class of protected wildlife is outlined in the *Nature Conservation (Wildlife) Regulation 1994*. Management plans prepared under the *Nature Conservation Act 1992* or the *Wet Tropics World Heritage Protection and Management Act 1993* may provide additional protection for rare and threatened species.

Policies and actions

The priority order for conservation and research of species, other taxa and species assemblages of plants and animals is:

- endangered and vulnerable;
- monotypic rare and threatened;
- endemic rare and threatened with restricted distributions;
- endemic rare and threatened with a wider distribution;
- non-endemic rare and threatened; and
- primitive and/or endemic.

Where the survival of a rare and threatened species is at risk from a particular action, the conservation of those plants or animals must be given priority over other management policies or actions.

Where information on conservation requirements is limited and a specific conservation plan has not been or is not being prepared, a threat abatement plan, if required, should be developed in consultation with the Department of Environment and affected land holders. A species recovery plan may be prepared where a conservation plan has not been or will not be prepared for rare and threatened species.

If required to give adequate protection and there is no specific conservation plan in force, threat abatement plans and species recovery plans may be established as statutory management plans under the *Wet Tropics World Heritage Protection and Management Act 1993*.

The Authority, in conjunction with relevant agencies, will:

- liaise with land managers to ensure that conditions on research permits require details of known distribution and abundance of species within or adjacent to the Area; details of individuals collected or destroyed as a result of research and the significance of their loss or destruction; and advice on how the research may be used to develop monitoring systems or conservation strategies;
- develop and test predictive models of the distribution of selected rare and threatened species to determine priorities for additional surveys;
- facilitate development of protocols for monitoring programs by research, management or community agencies;
- investigate how particular land uses, disturbances and other threatening processes affect rare and threatened species;
- liaise with local government during preparation or review of strategic plans to maximise habitat retention and minimise threatening processes for areas in and neighbouring the Area;
- support programs for management of habitats containing rare and threatened species;
- co-ordinate rare and threatened species recovery planning with the Department of Environment, ensuring there is independent scientific review to assess whether biological requirements of any rare and threatened species are being met;
- support and encourage research into individual species, their ecology and conservation requirements in accordance with policy priorities, and information on primitive and endemic species, known centres of endemism for such species and the evolution and distribution relationships of primitive and endemic plants;
- facilitate periodic meetings of technical experts to determine research and conservation priorities and strategies for rare and threatened species; and
- maintain a database on species distribution with an emphasis on rare and threatened species.

2.5 Feral animals

DESIRED OUTCOME...

The desired outcome is to have the impacts of introduced animals controlled to a level where World Heritage values are not adversely affected.

Background information

Feral animals, such as pigs, foxes, introduced fish, bees, cattle, cane toads, cats, dogs and even an introduced species of worm, pose a serious threat to the integrity of the Area. Schedule 2 'Undesirable Plants and Animals' (in the statutory Plan) details those plants and animals which are now, or have the potential to become, environmental weeds or feral pests.

Feral pigs are common throughout much of the Area and are arguably the most significant threat, damaging the natural environment through destroying trees, destabilising stream banks, contaminating water, increasing weed invasion opportunities and spreading animal and plant diseases. They also cause crop damage valued at hundreds of thousands of dollars annually throughout the region. Pig control was consistently cited as a major management priority by community groups and land managers who participated in developing this document.

Foxes are a potentially serious threat to ground-dwelling mammals, such as the endangered Tropical Bettong (*Bettongia tropica*), while cats are voracious predators of native birds, small mammals, reptiles and frogs. Domestic and hunting dogs allowed to roam will kill native fauna and may breed with dingoes. Exotic fish species have been introduced to the Area. These may prey upon, displace or outbreed native fish and spread diseases and parasites. Cane toads are deadly to many native predators and are thought to displace native frog species by competing for insect prey and living space.

Species of potential concern include deer, should they escape from farms adjacent to the Area, and the exotic worm, *Pontoscolex corethrurus*, which appears to be displacing native worm species in the Area.

Complete elimination of feral animals is considered to be an unrealistic goal within the Wet Tropics World Heritage Area at present. The focus of management strategies, therefore, is to minimise the impacts of feral animals on World Heritage values and on adjoining properties.

Policies and actions

The control and/or eradication of feral species within or immediately adjacent to the Area should be achieved through direct methods, such as trapping, and indirect methods, such as habitat manipulation, rehabilitation and community education.

Feral animal control activities should focus on:

- areas supporting rare and threatened species;
- areas of high feral animal concentration where natural or cultural values are being threatened;
- areas where feral animals impact on visitor enjoyment; and
- the Area's boundary and adjoining lands where major problem species occur.

Funding priority for scientific research will be given to projects designed to investigate the biology, distribution, ecological impacts and appropriate control methods of feral animal populations.

Only feral animal control techniques which are demonstrated not to compromise the values of the Area will be supported by the Authority.

As the elimination of pigs from the Area is beyond current technology or resources, control programs will be directed to areas of greatest threat. Community-based pig trapping to control numbers appears to be the most effective method available at present. However, the Authority also promotes research into other forms of control including biological birth control.

Community education and co-operative arrangements with local government will be pursued for control of domestic cats within and adjacent to the Area.

Amendments may be recommended to the animal schedules under the *Rural Lands Protection Act 1985* where the introduction of species to the Area needs to be prevented.

The Authority sees the following as priorities for control of feral animals:

- co-ordinated strategies for the control of feral animals with local land holders, relevant government agencies, rural organisations and interest groups;
- development and maintenance of a database on feral species which identifies species, locations and populations for priority management;
- personnel to co-ordinate and assist land holders and managers with feral animal control, and identify areas of potential feral animal entry to the Area;
- the community-based pig trapping program which encourages broad community participation;
- co-ordinated approach to the farming of potential feral animals in areas adjacent to the Area with relevant local government, government agencies and farmers to minimise the risk of potential feral animals escaping, and establishment of contingency plans in the event of an escape;
- closure and rehabilitation of roads and tracks no longer required for management, presentation or property owners' legal access where these may be used by feral animals as invasion corridors; and
- a system for regulating and licensing feral animal hunters in the Area.

Where an increase in the number, distribution or abundance of known feral animal species is cause for management concern, the Authority will review the measures taken and resources allocated to control feral animal species within the Area.

2.6 Weeds and diseases

DESIRED OUTCOME...

The desired outcome is to have the impacts of introduced plants and plant pests and pathogens controlled to a level where World Heritage values are not adversely affected.

Background information

Any introduced species, whether an exotic or a translocated native, is undesirable within the Area. An important aspect of weed control is preventing the planting or cultivation of those plants considered to be potentially invasive. Rehabilitation is also an important aspect of weed control (see section 2.7 for more detail). Schedule 2 of the statutory Plan details those plants which are now, or have the potential to become, environmental weeds - species that invade intact native communities or ecosystems.

The main categories of concern include shade-tolerant ornamental plants able to spread into the forest core, ornamental and fruit-bearing trees which could become a permanent component of the pioneer flora, introduced timber trees, pasture legumes and grasses and ornamental aquatic plants.

Environmental weeds are considered the gravest threat to the Area and require eradication. They are capable of causing major modification to species diversity and abundance and can totally destroy an ecosystem. Environmental weeds include the African tulip tree (*Spathodea campanulata*), coffee (*Coffea arabica*) (which has taken over large areas of under-storey in forests near Kuranda), the custard apple root stock known as Pond Apple (*Annona glabra*), *Thunbergia grandiflora* and the aquatic Cabomba plant (*Cabomba caroliniana*), an “escapee” from fish tanks, which smothers water ways, depriving them of oxygen, and turning them into biological deserts.

The fungus *Phytophthora cinnamomi* which causes “die back” disease in native vegetation is known to occur in many places within the Area.

Further research is required to identify methods and strategies for eradicating or controlling threats and preventing new outbreaks without detrimental effects on native plants. Research is also needed to develop ways of identifying likely weeds before they are introduced or escape. Some community groups and local governments have considerable experience in weed control. Encouraging these groups and drawing on their expertise promotes community involvement in management of the Area.

Policies and actions

The planting, cultivating or propagating of an undesirable plant (see Schedule 2) is not allowed anywhere in the Area. Killing or disposing of undesirable plants may be allowed under permit.

Available research funding will be allocated on a priority basis to investigations of the biology, distribution and ecological impacts of weed species and plant pathogens. Monitoring and control methods including practical alternatives to the use of herbicides will also be regarded as a high priority.

Given that weed and pathogen invasions are often responses to disturbance, management must focus on the cause of disturbance.

Weed and plant pathogen control will be considered as part of habitat rehabilitation practices to prevent re-invasion or replacement by another weed species or disease.

Weed and plant pathogen control will focus on highly localised populations or particularly invasive environmental weed species before they become widely established. Control of non-environmental weeds affecting the presentation of World Heritage values (including roadsides) is a secondary focus.

The Authority will promote management techniques appropriate to the problem species and local conditions. These must be cost effective, and must not adversely affect the Area's values.

The safe use of herbicides and development of improved mechanisms for the assessment of the environmental impacts of herbicides in the Area will be promoted.

Community education and a co-operative approach with individuals and government agencies will assist control of weeds and plant pests and diseases in and neighbouring the Area.

Weed and disease control activities will focus on:

- areas supporting rare and threatened or primitive and endemic species and rare vegetation communities and assemblages;
- areas of weed and disease concentration where natural and cultural values are threatened;
- areas where weeds and diseases impact on visitor opportunities; and
- the Wet Tropics Area boundary and adjoining lands where major problems occur.

Any management issues relating to exotic pine plantations on lands bordering the World Heritage Area will be the subject of a Memorandum of Understanding between the Authority and Department of Primary Industries.

The preparation of weed and disease profiles for high-risk areas is seen as a priority for the development of effective counter measures (e.g. cleaning of equipment after use in *Phytophthora cinnamomi* areas before use in another area, or the quarantine of known pest-carrying species).

The extent of *Phytophthora cinnamomi* infection in the Area and the effectiveness of control techniques need to be reviewed. Where feasible, appropriate control techniques will be implemented.

The Authority supports the retention of individual, non-native plants with significant cultural or historic importance where these are not threatening World Heritage values.

The Authority regards the following actions or approaches as priorities for weed control:

- a regional weed control strategy which identifies priorities for control activities;
- declaration of *Annona glabra* and *Harungana madagascariensis* as high priority species for eradication on all land tenures;
- weed control teams and related weed control initiatives;
- publication of the list of undesirable species which are prohibited from planting or cultivation within the Area;
- surveys and mapping of weed infestations;
- control and eradication of individual species or infestations on a priority basis; and
- dissemination of up to date information to land holders, managers and the community about species identification, threats and control methods, including appropriate herbicide use in wet tropical ecosystems.

In the event of a substantial increase in the number, distribution or abundance of known significant weed species or plant pests and pathogens, the Authority will review the measures taken and resources allocated to control weed species and plant diseases within the Area.

2.7 Rehabilitation

DESIRED OUTCOME...

The desired outcome is to have natural processes restored on disturbed land within the Area.

Background information

Substantial modification of the natural environment of the Area has resulted from activities such as logging, mining, farming, building of roads, inappropriate fire regimes and the introduction of feral animals and weeds. As a result, an estimated 190 000 ha of the Area requires some form of rehabilitation.

The term “integrity” describes the extent to which the natural heritage values of the Area are in their natural ecological, physical and aesthetic condition and are capable of sustaining themselves in the long-term. The natural ecological condition of the Area is the extent to which:

- the Area contains populations of native species in their natural patterns of abundance, association and distribution;
- the processes responsible for the origins, survival and evolution of species and communities operate in the Area; and
- the Area has the capacity to respond to short-term and long-term changes.

While integrity can be a difficult concept to document in a complex natural area, the degree of disturbance can be used as a general indicator of integrity.

Policies and actions

The maintenance and rehabilitation of the natural integrity of World Heritage values is a key principle for managing the Area. The main management principles involve restricting activities which might result in unnatural disturbance, minimising additional disturbance and rehabilitating areas which have been disturbed.

Preparation of a comprehensive rehabilitation plan for the Area will be facilitated by the Authority in cooperation with land managers.

Land holders within and neighbouring the Area and the wider community will be encouraged to control feral animals and weeds and re-establish native vegetation to link areas of natural habitat. The Authority will support initiatives for rate relief for conservation purposes with the relevant Local Governments.

The Authority will support co-operation and consultation with private industry, local government, individuals, Aboriginal groups, community groups and government agencies in rehabilitation efforts.

Rehabilitation works should be carried out in a manner which does not adversely impact on significant or representative natural or cultural features.

The removal of disturbance (including causal factors) and site stabilisation should be the first and most important step of the rehabilitation process.

Rehabilitation priority will be given to:

- habitats of rare and threatened species;
- rare community types;
- habitats of special faunal significance;
- fragmented areas and corridors;
- areas degraded by activities on neighbouring land;
- areas of high visitor use where significant degradation has occurred or is occurring;
- areas degraded by human activity (rather than natural processes such as cyclones);
- areas where there is ongoing significant erosion;
- areas degraded by feral animals and weeds; and
- visually prominent areas such as hillsides.

Rehabilitation plans will be required for development sites to ensure areas of disturbance are minimised and restored.

Revegetation works should normally use only locally sourced seed or vegetative stock of local native species.

The Authority may permit the planting of non-native species which cannot propagate (e.g. sterile hybrids) where they are specifically required for rehabilitation, such as rapid site stabilisation. However, deliberate planting of native species outside their historically natural range should generally be avoided.

The Authority will co-ordinate land managers in removing sources of disturbance to the greatest possible extent through:

- appropriate fire management and weed control;
- providing fencing to exclude stock;
- co-operative management agreements with land holders;
- community education;
- developing guidelines and management codes of practice for government agencies and private industry carrying out maintenance and other work requiring rehabilitation; and
- investigating cost effective rehabilitation techniques for use in specific situations, including assessing use of native rainforest grass species in hydro-mulching, optimal techniques for native vegetation establishment and growth (including use of fertilisers) and minimising the risk of spreading fungal and other diseases during rehabilitation work.

The Authority will foster community rehabilitation programs, providing groups with co-ordination, information and clear guidelines for projects, wherever possible.

The Authority, in consultation with land managers, will develop and implement standard protocols for monitoring rehabilitation projects at site and regional scales.

2.8 Fire

DESIRED OUTCOME...

The desired outcome is to have fire managed for the protection of life and property, protection of cultural values and maintenance of biodiversity in the Area.

Background information

The wet tropical rainforests of North Queensland are among the few vegetation types in Australia to be fire intolerant. Rainforest is extremely sensitive to fire and in some parts of the Area fire has caused the rainforest edge to recede. The Area also includes fringing areas of sclerophyll and wet sclerophyll forest which depend on fire for regeneration. These areas have been affected by the cessation of traditional Aboriginal burning of grassed areas and the fire breaks caused by the many roads and access corridors in the Area. In some areas, the absence of fire has resulted in an invasion by rainforest vegetation species, or by exotic grasses and other weed species of the sclerophyll forests, habitat for some rare and threatened species.

There are advantages in managing for a diversity of fire regimes in the Area. Fire may be utilised in the Area for a range of purposes including eradication of pests and disease, control of weed infestations, pasture management, firebreaking, reproduction and promotion of fire dependent plant species and maintenance of biodiversity.

Permits from a fire warden are required to light fires, apart from those lit by managers of state forests and national parks. Fire operations in the Area are usually undertaken co-operatively between land managers and the Queensland Fire Service. Local fire brigades also have a role in fire management, particularly in rural-residential areas. The Department of Environment and the Department of Natural Resources prepare fire management plans for areas under their management. These plans detail areas to be burnt, frequency of burning and other burning strategies.

While protection of life and property in and around settlements and areas of concentrated visitor use must be the first priority, maintenance of the Area's conservation values and naturally occurring processes must be ensured.

Policies and actions

Fire management in the Area will remain the responsibility of the land manager.

The Authority, land managers and the Queensland Fire Service will prepare an overall set of strategic fire management objectives to ensure co-ordination of fire management to protect life and property and cultural and natural values and to maintain biodiversity. This will be achieved through fire management plans and conditions on permits granted under the *Fire Services Act 1990*.

Land managers, in consultation with Queensland Fire Service, CSIRO, the Authority and land holders in and adjacent to the Area, will be encouraged to prepare comprehensive fire management plans for specific areas.

Land managers in the Area will be encouraged to extinguish fires where there is a threat to life or property, fire sensitive plants and animals and known cultural sites. In areas where there are no threats and the fire is consistent with objectives for vegetation management, fires may be allowed to burn to natural boundaries. This would be particularly appropriate in remote areas to ensure long-term minimum impact on wilderness qualities.

Fuel reduction burning will be carried out where necessary for the protection of life, property or natural or cultural values. Fire suppression methods which cause the least disturbance to the environment will be used as far as practicable, and necessary rehabilitation work carried out following fire suppression.

Prescribed burning practices will be developed by land managers to minimise the adverse impacts of fire on biodiversity. These will take into account the fire responses of different ecosystems, natural patterns of succession and the role of fire in the maintenance of biodiversity in certain vegetation community types, especially the sclerophyll communities.

Burning vegetation, other than in a rainforest is allowed in all zones of the Area if the burning is otherwise lawful.

Constructing a firebreak requires a permit in all zones, except where the firebreak is required for the urgent control of a fire.

Maintaining an existing or lawfully built fire break is allowed in all zones of the Area.

Where required, Fire Management Codes of Practice will be developed with relevant agencies and Aboriginal people and will adequately address:

- protection of the integrity of the Area;
- the safety of residents and visitors;
- the protection of natural resources, cultural resources and property and infrastructure;
- the fire regime required for fuel reduction and ecological purposes;
- ways of reducing fire danger;
- use of available fire fighting resources; and
- traditional fire management practices.

Fire management plans prepared for areas managed by the Department of Environment or the Department of Natural Resources which adequately address the above aspects will be adopted as Fire Management Codes of Practice.

Fire Management Codes of Practice should, as far as practicable, be based on an understanding of fire impacts gained from historical records and research, and be reviewed as necessary.

Fuel-reduction burning should occur within Zone A only where there is a threat to life, property or natural or cultural values.

Priorities for fire management include:

- development of a fire database, including information on fire management plans, past fires, their intensity, duration and other relevant information;
- liaison amongst land managers to develop a standard approach to fire monitoring; and
- an agreed set of objectives for each of the vegetation community types and the fire regimes necessary to achieve these objectives, combined with a program to monitor the effects of fire regimes on wildlife populations and vegetation communities.

The Authority will encourage research into fire management, including:

- research into traditional indigenous fire management practices and the implications for present management regimes;
- the role of fire in maintaining habitat diversity;
- the ecological effects of fuel reduction burning;
- the effect of exotic grass invasion of sclerophyll forest on the timing and intensity of fires;
- experimental studies on the impact of fire;
- evaluation of a fire prediction model;
- promoting awareness among land managers of the impact of fire on biodiversity; and
- long-term monitoring of regeneration and recovery at selected fire sites and other areas, subject to the advice of the Scientific Advisory Committee.

The community will be advised by land managers of control burning activities within the Area.

2.9 *Watercourse management*

DESIRED OUTCOME...

The desired outcome is to have clean and naturally flowing waterways uncontaminated by waste or run-off.

Background information

There has been deterioration in the quality of some watercourses in the Area. Dams, roads, service corridors and other disturbed areas can impede the natural flow of watercourses, while effluent and stormwater disposal from urban, residential and high-use visitor areas, rubbish tips, agriculture and stock and feral pig activity can contaminate the water.

In many cases, the problem may arise before the rivers reach the Area, particularly those with substantial development in their upper reaches. These influences can reduce the integrity of World Heritage values by introducing chemical pollutants, unnaturally high levels of nutrients and large sediment loads or by severely reducing the flow of a waterway. This can affect the aquatic life of rivers and the nutrient balance of surrounding rainforest and may also impact on the Great Barrier Reef. Maintenance of water quality is also important for human consumption.

The Department of Natural Resources has organised Integrated Catchment Management projects on the Russell, Mulgrave, Herbert, Barron and Johnstone rivers to ensure sustainable management and balanced use of land, water and related biological resources. The Department of Environment is lead agency for environmental management in Queensland. It has developed an Environmental Protection Policy (Water) as a framework for managing environmental impacts on waters, to identify environmental values and to outline water quality guidelines. Guidelines have also been prepared for a range of activities to assist local government and others to protect the environment.

Policies and actions

Interfering with the natural flow of a watercourse requires a permit in Zones C and D, and is prohibited in Zones A and B.

Disposing of waste, other than in an appropriate receptacle or operating a waste disposal facility is not allowed in the Area. However, private land holders may dispose of waste on their land if there is no waste removal service provided and the nearest general waste disposal facility is more than 20km away by road.

No new general waste disposal facilities (such as tips or dumps) will be allowed in the Area.

Disposal of effluent in the Area will be managed consistent with the Department of Environment's Environmental Protection Policy (Water) and the relevant local government by-laws and legislation.

The Authority will liaise with the Department of Natural Resources, Landcare and Integrated Catchment Management groups and local government to minimise impacts on watercourses in the Area and maintain or enhance water quality and riverine ecology.

The Authority considers the following actions to be important for maintaining water quality:

- identification of impacts of major sources of effluent discharge within the Area and review of options to reduce such impacts;
- monitoring of impacts of sedimentation on the reef where the Area is identified as the source;
- development of guidelines and a code of practice for effluent and stormwater disposal; and
- reduction of excessive sediment and nutrients from areas upstream of, or within, the Area.

2.10 Scenic management

DESIRED OUTCOME...

The desired outcome is to have the natural scenic landscapes of the Area managed to minimise the impact of activities which adversely affect World Heritage values.

Background information

The Area's superlative "natural phenomena, formations and features" – that is, its beautiful and awe-inspiring scenery – was one of the reasons for the Area being added to the World Heritage list. Spectacular rainforests, coastline, waterfalls, rugged gorges, mountain peaks and volcanic crater lakes attract locals and visitors from all over the world. Many artistic works, from plays and dances to music and paintings, have been inspired by the Area's exceptional beauty. The landscape is also an integral part of Aboriginal culture.

Threats to the Area's natural beauty include the impacts of buildings, roads, powerlines, earthworks, towers, logging and the burning of hillslopes where this leads to removal of native vegetation. Visual impact assessments and guidelines can help to minimise impacts on the scenic beauty of the Area. Specific site protection and rehabilitation may also be necessary.

Policies and actions

The Area's scenic values will be managed consistent with the intent of the zoning scheme.

Further dominant scenic alterations should not be allowed anywhere in the Area.

Rehabilitating scenic alterations in Zone B will receive high priority.

When a decision maker is considering whether to issue a permit for an activity and determining any conditions which may apply, the decision maker must have regard to the likely effect of the proposed activity on the scenic amenity of the Area.

The Authority will encourage local government and land managers to consider visual impact as an important part of planning and impact assessment for development proposals in or neighbouring the Area.

The Authority will encourage local government to incorporate scenic management provisions in planning schemes, especially for areas such as hillsides within or neighbouring the Area.

2.11 Cultural heritage

DESIRED OUTCOME...

The desired outcome is to have the Area managed in accordance with the Primary Goal in a way which contributes to the conservation of Aboriginal and non-Aboriginal cultural heritage.

Background information

The Department of Environment has primary responsibility for managing cultural heritage in Queensland. Several State and Commonwealth Acts provide for the legal protection and management of Aboriginal and non-Aboriginal cultural heritage. These are: *Cultural Records (Landscapes Queensland and Queensland Estate) Act (1987)*; *Queensland Heritage Act (1992)*; and *Aboriginal and Torres Strait Islander Heritage Act (1984)*. The *Nature Conservation Act (1992)* includes cultural heritage protection as one of the cardinal principles for the management of national parks.

Many cultural places are recorded, but further archaeological and anthropological research is required. Many places are features in the natural landscape which have significance because of the stories and traditions associated with them. Evidence of human use at some places may contribute to our understanding of the human past, including interactions between humans and the environment.

Aboriginal communities believe that natural values and cultural values cannot be separated and want the Area to be recognised as a living cultural landscape. Aboriginal cultural values include the continuous traditions of Aboriginal peoples associated with the Area. Custodianship of cultural heritage may involve maintaining confidentiality about aspects of heritage. Several Aboriginal organisations provide a point of contact for consultation about managing cultural heritage.

The Area's examples of non-Aboriginal culture include old settlement sites, gold and tin mining and logging camps and tracks used by European and Asian settlers.

Policies and actions

The Authority acknowledges and respects the Aboriginal belief that natural and cultural values are inseparable and that the land is a living cultural landscape.

The Department of Environment will continue to be the lead agency for managing cultural heritage in the Area. The Authority will work with Aboriginal peoples and the Department to ensure management of natural heritage is closely integrated with management of cultural heritage.

A cultural heritage strategy for site protection will be developed by the Department of Environment for the identification, management and protection of cultural sites and landscapes in the Area in consultation with Aboriginal peoples.

In the spirit of reconciliation, all relevant agencies will be encouraged to work with Aboriginal peoples to develop cultural heritage strategies.

Decisions concerning Aboriginal cultural places must be subject to consultation with relevant Aboriginal representatives (specifically traditional custodians). Every effort will be made to ensure that Aboriginal custodians are included in the decision making process.

The Authority will continue to collect information and support research that may assist the Commonwealth Government in establishing whether there is a case for World Heritage listing of the Area on the basis of its cultural values, as well as its natural values.

Where required, access to cultural heritage places may be restricted by land managers or traditional custodians to protect cultural and natural values.

When considering issuing a permit for an activity (and determining any conditions which may apply), the decision maker must have regard to the likely effects on the cultural heritage of the Area.

Promotional, interpretive and educational material relating specifically to Aboriginal places must be endorsed by the traditional custodians prior to use and explain the need for involvement of Aboriginal peoples in on-ground management of cultural heritage.

The Authority will, in conjunction with land managers,:

- seek information, guidance and input from relevant organisations for Aboriginal cultural heritage management;
- seek the views of representatives of the Aboriginal community on management of Aboriginal cultural sites, places and landscapes;
- support new and existing cultural site recording and assessment programs while ensuring such work involves the relevant Aboriginal community and accords with an agreed code of ethics;
- ensure management plans dealing with Aboriginal traditional use or site management consider social and cultural impacts; and
- involve Aboriginal communities in ongoing research and periodic assessment of issues or site-based management plans.

The Authority may undertake or commission investigations into the impact of existing or proposed development on cultural heritage as part of its ongoing research program. These investigations may establish or contribute to site, relic or anthropological monitoring.

2.12 Geological processes and landforms

DESIRED OUTCOME...

The desired outcome is to have all soils and landforms in the Area protected from non-natural degradation.

Background information

Geological processes and landforms are amongst the values for which the Area was inscribed on the World Heritage list. The Area contains a variety of outstanding geological and geomorphological features and ongoing processes which are important for an understanding of the evolution, composition, origin and dynamics of the physical landscape. Examples include-volcanic crater lakes and a number of spectacular gorges and waterfalls which are a result of the eastern coastal escarpment development and retreat. Numerous geological features within the Area have been identified and listed on the Register of the National Estate in Queensland (e.g. Mt Hypipamee has been listed as an example of a particular type of crater lake known as a diatrema).

Soil forming (pedological) processes include interactions between the rocks (parent materials), climate, flora and fauna, and drainage regime, which over time, produce soils. In the Area these processes are central to development and continuation of the rainforests.

Landforms and soils in the Area provide a record of many of the environmental changes and processes that have occurred during long periods of Earth's history. The integrity of these processes should be maintained where practicable so they can continue to contribute to the natural systems and the plant and animal communities that rely on them directly or indirectly for life.

The wet tropics region has had a long and complex geological history, initiated by early Palaeozoic (late Silurian period, 420 million years ago) marine sedimentation and volcanicity in the Hodgkinson Basin (which continued until about 360 million years ago). Subsequent major events included granite intrusion (about 320 million years ago), felsic volcanism (Upper Palaeozoic) and Cainozoic basaltic volcanism (resulting in formation of Lake Eacham and Lake Barrine). During this period (about 360 million years ago), the Palaeozoic sediments were strongly folded, faulted, metamorphosed and subsequently deeply eroded to expose many granite plutons (e.g. Mt Bartle Frere, 1622m).

In the period 100 - 65 million years ago, during the break-up of Gondwana, the eastern coastal escarpment was formed by major updoming and the continental edge subsiding along major fractures. Since this regional uplift there has been substantial erosion and retreat of the eastern escarpment to form the present topography with deposition of sediments off shore and alluvial deposits along the coastal plain. It is a zone of rugged topography, rapid geomorphic processes and diverse environments.

Policies and actions

Significant or representative sites of geological and geomorphological interest (including processes) should be identified and management strategies implemented to prevent, reduce or remove threats to these areas. Sites should be selected on the basis of the extent to which they represent specific characteristics of the Area or that they include an outstanding, rare, or possibly unique geological or geomorphological feature.

2.13 Reporting and evaluation

DESIRED OUTCOME...

The desired outcome is to have an effective and accountable system for monitoring and reporting changes in the condition of the Area, and continual improvement in management based on evaluation of past management activity.

Background information

The Authority has overall responsibility for reporting on the status of the Area, co-ordinating implementation of the policies and actions within the Plan, and evaluating the effectiveness and efficiency of management activity (including management plans).

A simple, practical and easily implemented system for reporting on the condition of the Area and evaluating management activity is required. This system should be in a form which is understandable to the community, meaningful to managers and can be incorporated into other management and reporting processes, such as annual reports. Performance indicators need not be direct measures; they may be comparisons or aggregate measures which indicate the trend or direction of change over time.

The Authority has a statutory obligation under the *Wet Tropics World Heritage Protection and Management Act 1993* to monitor, advise and report to Ministerial Council on the state of the Wet Tropics World Heritage Area.

There is a need to distinguish between natural and human-induced change so that alterations due to management activity can be distinguished from those which have other causes. Management systems must be able to address emerging threats and make appropriate corrections when required.

The Authority publishes an Annual Report which is available from the Authority's Cairns office on request. The Annual Report provides information on the progress of each of the Authority's programs and will also provide information on the conservation status of the Wet Tropics as this information becomes available.

Policies and actions

The Authority will develop a detailed performance evaluation plan in conjunction with agencies with implementation responsibilities. It will include monitoring strategies, performance indicators, a mechanism for regular reporting and methodology for integrating its results in reviews of the Wet Tropics Plan and other management plans.

In conjunction with relevant agencies, interest groups and the Scientific Advisory Committee, the Authority will investigate establishing permanent sites within representative parts of the Area for measuring long-term biological change.

Where practicable, data collection and other programs funded or undertaken by the Authority should contribute information on the condition of the Area and evaluate management activity.

The results of reporting and evaluation activities will be used, where appropriate, to help develop new, or modify existing, management policies and actions. Management strategies not contributing to achieving the Primary Goal will be reviewed.

The Authority, in consultation with agencies with implementation responsibilities, will develop standard indicators for measuring and reporting on management efficiency and effectiveness in the Area.

All projects funded or undertaken by the Authority should include a monitoring and review component.

Performance indicators will be used to evaluate the effectiveness, efficiency and appropriateness of management actions towards achieving agreed goals and outcomes.

While more detailed monitoring programs are being developed, the Authority will use the following regional indicators to report on the condition of the Area:

- tenure and conservation status of lands and water, including co-operative management arrangements and zoning status, and the nature and extent of use rights within the Area;
- extent to which the four criteria for which the area was listed and essential ecological processes are maintained;
- extent and severity of disturbances to natural conditions from activities such as roads, powerlines, clearings, dams, boundary encroachments etc.;
- number, location, extent, frequency and intensity of fires in or adjoining the Area;
- occurrence of feral animals and extent of weeds in the Area;
- conservation status of plants and animals and the number of conservation management programs in place;
- location, type, number and extent of water extraction operations from within the Area following the principles of ecological sustainability and limits of acceptable change;
- distribution and abundance of distinct and separate populations of endemic taxa with an emphasis on species considered rare or threatened;
- number, location, condition and significance of known cultural heritage sites;
- number, type, location and relative abundance of distinct visitor opportunities (including activities, settings and facilities);
- number, distribution and characteristics of visitors to the Area; and
- community and visitor knowledge of, and attitudes towards, the World Heritage concept, values of the Area, and management activity.

Agencies with implementation responsibilities will be requested to contribute to annual evaluation reports on implementation of the policies and actions and achievement of the desired outcomes contained in this Plan.

The Authority will be responsible for preparing an overall report on implementation of the Plan and will publish an evaluation of the Plan's performance in its annual report. It will also provide information to the Australian Government for its annual report on World Heritage sites in Australia.

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3.0 *Enjoying the Wet Tropics Area*

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3.1 Presentation, information and interpretation

DESIRED OUTCOME...

The desired outcome is a community which understands and appreciates the values of the Area and is supportive of and actively involved in management activities to conserve these values.

Background information

Information and interpretation is an important part of the Authority's responsibility to present the values of the Wet Tropics World Heritage Area to local, national and international communities. Provision of information enables the 300 000 people living within 50km of the boundaries and the residents and visitors who contribute to the estimated 4.8 million visits (Manidis Roberts and Taylor, 1994) to the Area annually to be better informed of its values, increasing the likelihood of support for the Area and its management.

Land managers and the Authority already provide a range of pre-visit and on-site information and interpretive opportunities which promote safe, educational and enjoyable visits to the Area.

Presentation of the Area also occurs in a number of ways which do not involve visitation. Film and book production, visual and performing arts, calendar and postcard production are some examples where the natural and cultural values of the Area have been presented to the national and in some cases global community.

Policies and actions

Information and interpretive activities will take place within the context of the Authority's community relations strategy.

Land managers and the Authority will continue to provide a range of pre-visit off-site and on-site information and interpretive opportunities promoting safe, educational and enjoyable visits to the Area consistent with Australia's obligations to present the Area under the Primary Goal.

Interpretive techniques will include development and promotion of a minimum impact code for visitors. Themes will focus on the World Heritage listing criteria, natural and cultural heritage and management issues.

Special attention will be given to the interests of rainforest Aboriginal communities. Information and interpretation incorporating Aboriginal cultural messages will take place with the involvement of the communities themselves. Communities initiating interpretive projects will be supported.

Priority will be given to the widespread use and public recognition of the Wet Tropics logo and graphic design standard, (consistent with strict guidelines to ensure appropriate use). This will include prominent highway and entry signage for visitor facility nodes in the Area.

3.2 *Visitor research*

DESIRED OUTCOME...

The desired outcome is to have management decisions based on the best available knowledge of the characteristics, behaviour and preferences of visitors to the Area.

Background information

Effectively managing visitor use, providing quality visitor opportunities and successfully targeting interpretive material requires a detailed understanding and appreciation of the characteristics, behaviour and preferences of visitors to the Area. It is also important for management to know whether any actions or policies are preventing people from visiting the Area. This involves undertaking surveys of visitors and other people, collecting visitor use data, researching and monitoring the social impact of particular visitor activities and facilities and understanding broader trends in recreation participation. Visitors may include both residents and non residents.

Visitor information is vital to maintaining or improving the quality of visitor opportunities and to formulating strategies to successfully manage current and future visitor demand consistent with the protection of natural and cultural values. Social research and monitoring may include information on visitor profiles, market segments, visitor information requirements, recreation needs, preferences and expectations, travel patterns, and satisfaction levels.

A detailed visitor use monitoring program has been established for visitor sites throughout the Area with baseline surveys undertaken during the 1993/94 wet and dry seasons. Frequent and regular collection of valid and reliable data is necessary to inform management of changes in visitor patterns.

Policies and actions

If resources permit, the visitor use monitoring program will- continue and be co-ordinated such that information gathered makes best use of available resources. Where required the visitor monitoring program may be expanded to incorporate further visitor sites and uses.

Research on the environmental, cultural and social effects of visitor use of the Area is considered important.

The Authority will involve land managers, local community and the tourism industry within the Area when developing and implementing visitor research programs.

Visitor research requirements include the need to:

- develop and maintain a database of all available information relating to visitor use of the Area;
- undertake research into visitor use to facilitate improved land management and greater understanding of the attributes that contribute to visitor satisfaction;
- research the information requirements of visitors during each phase of a recreation trip (e.g. pre-planning, travel to, on-site, travel back, recollection) to assist with interpretive and educational programs;
- conduct surveys to examine off-site appreciation and determine reasons for non-use of the Area;
- examine community valuation of the Area using non-economic measures (e.g. aesthetic, inspiration and recreation values);
- develop profiles of the major market segments among visitors to the Area;
- undertake research to understand the differences between the recreation desires and expectations of residents and visitors; and
- maintain permanent traffic counting and recording sites throughout the Area.

Academic institutions will be encouraged to undertake research into visitor use of the Area consistent with management information requirements.

Field staff within the Area will be consulted when developing and implementing any visitor research program for the Area.

Visitors will be encouraged to participate in approved research and monitoring programs within the Area.

Systems should be developed to provide information which allows land managers, other agencies and the tourism industry to make informed visitor management decisions.

The Authority will encourage studies to gain a greater understanding of the role of the Area in the region's tourism industry. This may be achieved through the use of existing information, expansion or specific analysis of existing regional visitor surveys, or initiation of new studies. Culturally appropriate methods should be employed when researching cultural tourism activities.

Opportunities for visitors to provide input into management of the Area, such as post-visit evaluation, will be explored and, if feasible, provided.

3.3 *Visitor opportunities*

DESIRED OUTCOME...

The desired outcome is to have a diversity of quality visitor opportunities consistent with the interests, capabilities and expectations of residents and visitors and the protection of World Heritage values.

Background information

The Wet Tropics Area offers a diversity of visitor opportunities ranging from remote, self-reliant wilderness experiences to easily accessible experiences in highly developed sites. Such a diversity ensures the widest possible range of people can experience and appreciate the Area, according to their needs, interests, capabilities and expectations. The duty to present World Heritage sites in accord with the Primary Goal is not, however, confined to providing opportunities for visitation. While it is important that such opportunities be available to the community, this should not be at the expense of protection and conservation.

Vehicle touring is the most popular way of enjoying the Area and is often combined with walking, picnicking and camping. Opportunities range from highway bus tours to private four-wheel-drive trips in remote areas. Estuaries, lakes and rivers cater for motorised and non-motorised activities and provide an internationally recognised setting for canoeing, rafting and kayaking. Horse riding is a popular recreational activity. However, it is not allowed in national parks, but is unrestricted on dedicated roads. The Bicentennial National Trail which traverses parts of the Area from Julatten to Cooktown is a popular horse riding experience. Mountain biking is a legitimate recreational use of the Area on formed roads subject to land manager's approval, providing that there is no significant adverse environmental impact and there is no significant adverse impact on other recreation users' quality of experience. Most camping sites are relatively small and are provided by the Department of Environment or the Department of Natural Resources. There are several private airstrips and helicopters landing sites in the Area associated with commercial rafting.

Planning will ensure provision of this diversity on a regional scale while minimising potential for conflict between users and damage to the World Heritage Area. Visitor opportunities need to be based on presentation of World Heritage values in ways which are ecologically sustainable and contribute to the Primary Goal. Planning also needs to cater for residents' recreation requirements, which are often different from those of tourists. Area specific management plans will provide more detailed strategies for managing visitor opportunities.

Management can influence distribution of visitors by providing different types of facilities and standards of access. This can be useful for reducing pressure on sensitive areas such as lowland and high altitude rainforest and natural lakes, through redirecting visitors or commercial tour operators to more resilient attractions easily accessible from regional accommodation centres. In some circumstances, visitor access may be restricted in areas that have existing uses such as grazing.

Protection of wilderness (large natural areas remote from settlement and access) helps maintain the natural integrity of the Area and provides opportunities for visitors to enjoy remote, self-reliant recreational pursuits in a natural area with a high degree of ecological integrity. While some activities or facilities that cause disturbance may be considered necessary for management, scientific or emergency purposes, the overall approach to wilderness management is to minimise and rehabilitate disturbances.

A set of Visitor Management Guidelines has been developed which describes four visitor opportunity classes: visitor facility node, recreation, semi-remote and wilderness (see Table 4 and Map 1). For each of these classes, criteria have been defined for the physical character, access, site modification, social interaction, degree of self-reliance and style of management. Strategic visitor sectors portray styles of recreation opportunity on a broad regional scale. Strategic visitor sectors are identified on Map 1.

A distinction is made between visitor facility nodes and visitor sites.

Visitor Nodes are characterised by any one, or a combination of, the following criteria:

- opportunities for presentation with intensive social interaction;
- a management presence may be obvious;
- accessibility by vehicles along presentation roads;
- significant developed visitor facilities, including, for example, formal car parks, toilets, picnic facilities, camping areas etc;
- access to a range of recreation opportunities; and
- potential for further development of visitor facilities.

Visitor Sites are characterised by any one, or a combination of, the following criteria:

- access points to an attraction, where a visitor may expect opportunities for presentation with limited social interaction;
- management presence is low key;
- accessibility by a variety of means;
- low key visitor facilities, including, for example, informal pullover points off a road, viewing platforms, lookouts, toilets; and
- access points to a single attraction.

Policies and actions

Visitor opportunities and activities in the Area will be managed to achieve presentation of World Heritage values in ways which ensure protection of these values and the integrity of the Area. This will be done in accordance with the intended physical and social setting, management purpose and provisions of each zone, the proposed Wet Tropics Ecotourism Strategy (discussed below), the Visitor Management Guidelines (Map 1), associated visitor opportunity classes (Table 4) and detailed management plans.

The zoning scheme allows a permit to be issued for development of visitor infrastructure in Zones C and D, consistent with Visitor Management Guidelines (Map 1) and visitor opportunity classes (Table 4). Walking tracks may be developed, subject to a permit, in all zones.

A Wet Tropics Ecotourism Strategy is being developed in consultation with the Wet Tropics Tourism Liaison Group, the Far North Queensland Promotion Bureau, local government, government land managers, voluntary conservation sector, Aboriginal groups and the local community. The Strategy will:

- enable visitors to choose from a variety of quality, nature-based opportunities appropriate for the long-term presentation and protection of World Heritage values;
- ensure diversity of visitor opportunities on a regional scale;
- contribute to the Primary Goal; and
- incorporate monitoring components.

In the longer term detailed site plans (dealing with visitor and conservation management issues) should be prepared for visitor facility nodes and visitor sites in the Area in consultation with the Authority, land managers, Aboriginal people and the tourism industry. Site plans will be required prior to any major upgrade of an existing visitor facility node or visitor site.

The Authority will work with the tourism industry and land managers to achieve a sustainable level of visitor use of the Daintree-Cape Tribulation area. Future growth beyond the sustainable level of visitor use in the Daintree-Cape Tribulation area will be directed to appropriate areas south of the Daintree River.

In planning for and managing visitor opportunities, consideration will be given to the Queensland Ecotourism Plan prepared by the Department of Tourism, Small Business and Industry, and Queensland Department of Main Roads requirements for managing State-controlled roads.

Where appropriate, the Authority may assist local Aboriginal and non-Aboriginal communities to provide visitor opportunities based on presentation of World Heritage values.

In order to cater for the largest proportion of visitors, priority will be given to providing, maintaining and promoting short, easily accessible nature walks, day-use, including picnicking, and scenic car touring (four-wheel-drive and two-wheel-drive), which are ecologically sustainable and contribute to the Primary Goal.

Separation of potentially conflicting user groups by land managers is encouraged. Commercial tour activity may be controlled to allow residents use of sites not frequented by many tourists. Such strategies need to be undertaken in consultation with the tourism industry and affected communities.

Sites managed for use predominantly by local residents will not be publicised.

The possible displacement of local residents will be taken into account by land managers when considering the upgrading of visitor facilities, changing visitor access (e.g. closing or upgrading a road) and providing recreation and commercial tourism opportunities. Strategies to cater for local visitor use will be developed.

Regional visitor strategies, developed in conjunction with land managers, local government, the tourism industry and the community, will initially be based on parts of the Evelyn and Atherton Tablelands, including Atherton, Tinaroo and the Johnstone River areas; Paluma Range and Wallaman Falls; and Julatten, Kuranda and Lake Morris areas. These strategies will provide a co-ordinated approach to managing visitor opportunities.

The Authority will encourage management of visitor sites adjacent to the Area in a manner that complements visitor management within the Area.

Presentation opportunities, such as lookouts, picnic and parking areas along appropriate State-controlled roads and regional access roads, will be provided and maintained through co-operation with the relevant government agencies.

Visitor activities

Land managers will continue to have primary responsibility for managing visitor activities in the Area.

Vehicle touring in the Area will be managed in accordance with the relevant road classification.

Walking in the Area will be managed in accordance with a Walking Track Strategy (see section 3.5).

River-based activities will be managed in accordance with a Wild and Scenic River Strategy (see section 3.6).

Land managers may temporarily or permanently close sites, limit or restrict recreation activities where activities or emergency situations may endanger the public or where visitor use is significantly affecting natural, cultural or recreational values. Where appropriate, given the particular circumstances, such actions will be accompanied by community consultation.

Land managers, in consultation with the Authority, Aboriginal people, activity groups and commercial operators will:

- identify suitable areas for different types of activities;
- identify rights, responsibilities and constraints with regard to each type of activity;
- develop a minimum impact code and monitoring system for each type of activity (where required); and

- ensure that available locations, appropriate behaviour, safety considerations and management controls are widely publicised.

Where there is pressure from changing societal values and technological advances to allow new recreation activities, the appropriateness of these activities will be assessed according to the extent to which the activity:

- is based on presentation or appreciation of the Area;
- conflicts with or complements other uses of surrounding areas, within and outside the Area;
- requires construction or provision of additional infrastructure and support services;
- can be supported by the natural resource base;
- has risk management and liability implications;
- is consistent with the intent of the zoning scheme, Visitor Management Guidelines, desired outcomes for the Area, and area specific management plans; and
- has the potential to impact adversely on the Area.

Land holders or land managers may allow bicycle riding on formed roads, if there are no significant impacts upon the Area or the quality of other visitors' experiences. Bicycle riding is not appropriate on designated walking tracks and traditional horse trails.

Horse riding may be allowed on formed roads, subject to permission from the land holder or manager, but is not appropriate on designated walking tracks. Horse riding may also be continued in those areas where it is part of an existing use right.

Horse riding and mountain biking are allowed on the Bump Track.

The Authority will consult with the Bicentennial National Trail executive concerning management of that part of the Trail which crosses the Area.

Landing an aircraft is not permitted except in natural clearings for essential management or where allowed by land managers. The ongoing use of existing (non natural) clearings for landing sites by Department of Defence will also be permitted. Landing an aircraft for emergency purposes is allowed in all zones.

TABLE 4. Visitor opportunity classes

Note: Classes and their boundaries illustrate preferred recreation opportunities on a regional scale. Site specific assessments may be required to determine the appropriateness of specific uses or developments in each visitor opportunity class. Approval for developments is not implied by this table. Access is subject to land holder or land manager permission. Some existing approved uses may not be entirely consistent with these classes but may be allowed to continue. This table should be read in conjunction with Map 1: Visitor Management Guidelines.

Criteria DESCRIPTION <i>(Physical character and potential recreation experiences)</i>	Visitor facility node	Recreation	Semi-remote	Wilderness
ACCESS <i>(Remoteness from settlement and major access routes, access standards and type of transport used)</i>	Developed visitor facilities, accessible by conventional vehicle, for presenting the Area, which serve as a hub for associated opportunities radiating from the node. Opportunities exist for nature appreciation and intensive social interaction. Will include substantial visitor facilities on major access corridors with conventional vehicle access along well maintained roads.	Natural areas providing vehicle-based recreation opportunities to appreciate nature and interact with other users. Will usually include or be within 0.5 km of major access routes. Most access is via four-wheel-drive or conventional vehicles along maintained and signposted roads subject to possible seasonal closure.	Predominately natural areas providing recreation opportunities for nature appreciation and solitude in an environment which requires a degree of self reliance away from motorised vehicle use and large numbers of other visitors. At least 0.5km from settlement and motorised access routes. While motorised access is generally not allowed, some roads may remain open for essential management activity or access for existing use right holders. Public access by walking tracks.	Pristine natural areas remote from disturbances associated with modern technological society. Opportunities for solitude in an environment which requires a high degree of self reliance. At least 3km from settlement and motorised access routes. Walk in access only with no motorised use.
SITE MODIFICATION <i>(Extent, type and design of infrastructure, facilities, amenities and the style of accommodation provided)</i>	Components of natural environment modified to enhance specific visitor opportunities and reduce impacts. Accommodation facilities, toilets, information centres, picnic and day-use sites, camping areas, major lookouts and walking tracks may be present.	Predominately natural area with some modification evident at specific sites. Vehicle tracks and graded walking tracks, trails and routes may exist, together with low-key camp sites. Toilets are appropriate.	Pristine area with minor modifications of some sites, but only for essential management or visitor safety. Walking tracks, trails and routes may exist together with undeveloped low-key camp sites. Toilets may be provided at appropriate locations.	Pristine area with no facilities or site modification except where absolutely necessary for essential management or visitor safety. These will be low-key and integrated with the surrounding landscape.
SOCIAL INTERACTION <i>(Density of users, degree of social interaction and opportunities for solitude)</i>	Large numbers and groups of users on-site and in nearby areas with continuous human occupation (in accommodation) and interaction between users.	Frequent encounters with other user groups can be expected especially along access routes (roads, rivers or walking tracks) and at camp sites or day-use sites.	There would be little interaction between users with usually less than about four to six other groups encountered during a day and no more than about two other groups within sight or sound at camp sites. Visitors must be almost totally self-reliant as very few support services would be appropriate.	Interaction between users would be minimal with usually less than two other groups encountered during a day and no other groups within sight or sound at camp sites.
DEGREE OF SELF-RELIANCE <i>(Level of support services required)</i>	A low degree of self-reliance is required as a high level of support services and facilities may be provided.	Some support services and facilities may be provided. There may be a perception of self-reliance for novice users.	Visitors must be almost totally self-reliant as very few support services would be appropriate.	Visitors must be totally self-reliant as support services would be inappropriate and should not be expected.
STYLE OF VISITOR MANAGEMENT <i>(Level and type of on-site management including site constraints and regulations)</i>	A very high degree of on-site management activity may be evident, including the use of physical barriers to constrain pedestrian and vehicular movement. Bookings may be necessary for accommodation or activities and length of visit may be controlled.	Moderate level of on-site management activity, including signs and management patrols to establish appropriate visitor expectations and behaviour.	Minimal on-site management which may include management patrols and occasional signs. Emphasis on off-site interpretation.	Very little on-site management. Focus would be on establishing appropriate expectations and standards of behaviour by off-site means such as pre-visit brochures. Permit systems may be used.

3.4 Commercial tourism activities

DESIRED OUTCOME...

The desired outcome is to provide for commercial opportunities to access and appreciate a representative range of the natural and cultural values of the Area in an ecologically sustainable manner which develops an increased awareness of the Area's natural and cultural values.

Background information

The area is an outstanding visitor destination. Regional economic contributions have been estimated at \$753 million in 1996 (Driml, in preparation). More than 100 commercial operators at present provide opportunities for people to access and appreciate the Area's natural and cultural values. About one-third of all visitors to the Area travel as part of a commercial tour. The tourism industry is recognised as an important ambassador for the Area and major presenter of its attributes through professional interpretation, particularly guided visits, transport and ancillary services such as accommodation. The tourism industry can make a vital contribution to the challenging task of visitor management.

Commercial tour operations are managed through a permit system administered by land managers (specifically Department of Environment and Department of Natural Resources). Permits may specify activities which may occur, total numbers per time period, group sizes, frequency of use, seasonal restrictions and other conditions. A Tourism Liaison Group has been established for the Area as a forum for liaison between tourism operators, land managers and the Authority.

It is in the mutual interests of conservation and tourism that satisfying client needs is second only to protecting that which tourists have come to visit and enjoy. Well-trained, properly informed tour operators can promote appropriate visitor behaviour and provide satisfying visitor opportunities consistent with conservation management objectives. A majority of commercial tours focus on just a few areas of the wet tropics (e.g. Daintree-Cape Tribulation) and there is considerable scope to develop alternative tourism destinations.

Cultural tourism is not well developed in the Area. While some tours and visitor sites focus on interpretation of the cultural values of the Area, there is potential to provide far greater insight into indigenous and non-indigenous cultural heritage. With respect to indigenous cultural heritage, each Aboriginal community or group has specific rights over its cultural information. These are often referred to as intellectual and cultural property rights. Accordingly, it is appropriate that indigenous peoples decide how and by whom their cultural knowledge is used and presented.

Policies and actions

While the Authority and other agencies will provide input, land managers will continue to have primary responsibility for managing commercial tour operations in the Area.

In exceptional circumstance where there is a need to protect particularly sensitive sites, land managers may permit access only in the company of an approved guide.

Commercial tour permits will be managed consistent with the Plan, the proposed Wet Tropics Ecotourism Strategy, Visitor Management Guidelines and other relevant issue or area specific management plans.

Commercial tour activities may be appropriate in all zones of the Area, subject to individual assessment and their consistency with the character, setting and provisions for each zone. It may be necessary to restrict or prohibit commercial tour activities where natural and cultural values are threatened.

Where opportunities arise, Aboriginal communities should be assisted in presenting cultural values, particularly where this is associated with the presentation of World Heritage values.

The existing Wet Tropics Tourism Liaison Group will be maintained as a primary forum for liaison between tourism operators, land managers, the Authority, Aboriginal peoples and other relevant groups.

The Authority and land managers will work as part of the Tourism Liaison Group to:

- review the commercial tour operator permit system to improve administration and co-ordination between agencies and ensure consistency with the Plan in protecting the Area's natural and cultural values;
- evaluate the cost of providing the setting for commercial tour activities and the system for collecting and distributing user fees for land management;
- foster and maintain positive working relationships between the tourism industry and land management agencies;
- develop a code of practice for tourism operators when working with Aboriginal peoples;
- develop an information sharing system to ensure interpretive material provided to visitors is accurate, appropriate and relevant to opportunities in the Area (this may include use of a "quality control" stamp on interpretive material);
- provide advice on priorities for capital works in the Area;
- establish an inventory of commercial tourism opportunities in the Area to help plan for growth away from those areas where further growth is inappropriate;
- encourage sustainable use and appreciation of the Area through product and image development and promotion;
- support the implementation of the National Ecotourism Accreditation Program for ecotourism operators;

- continue to contribute to training programs to help ensure tour operators are properly informed, better able to promote appropriate visitor behaviour and provide satisfying visitor opportunities;
- undertake ongoing reviews of visitor management policies and actions;
- support the inclusion of non-specific Aboriginal cultural information in tour operator training courses (such as the TAFE heritage interpretation courses) to encourage a sensitive approach to cultural heritage and promote the involvement of Aboriginal peoples in cultural tourism activities; and
- identify, in consultation with relevant communities and interest groups, appropriate opportunities for presenting Aboriginal and non-Aboriginal cultural values in the Area.

Tour operators and land managers will be encouraged to give increased emphasis to presenting the Aboriginal and non-Aboriginal cultural values of the Area. Where Aboriginal cultural information is presented, it should be endorsed by the relevant Aboriginal community and, if the community desires, should directly involve local Aboriginal peoples in its presentation.

Commercial tour users will be surveyed as part of the visitor use monitoring program.

3.5 *Walking opportunities*

DESIRED OUTCOME...

The desired outcome is to have a range of quality walking opportunities consistent with the protection of World Heritage values.

Background information

Walking tracks provide an excellent way for people to appreciate and enjoy the Area. The location of many existing walking tracks has developed in an ad hoc manner and use is highly concentrated on just a few short graded tracks and pathways. Apart from rugged off-track walking, there are few existing opportunities in the Area for people to experience long distance walking and remote area camping. Public consultation has revealed a demand for this opportunity.

A Walking Track Strategy for the Area will be developed with broad community consultation for the provision of a range of quality walking opportunities with different physical characteristics, facilities, access and expected walker experience.

Policies and actions

Walking opportunities may range from undeveloped trails to highly developed tracks and boardwalks with toilet facilities, tent sites, bridges, hand rails, etc. Construction of such facilities may be subject to impact assessment.

Walking tracks may be temporarily or permanently closed by the land manager to ensure visitor safety or to protect natural and cultural resources.

Walking tracks are for pedestrian use only. The use of vehicles, including bicycles, is not appropriate on designated walking tracks. Similarly horse riding is inappropriate on designated walking tracks.

Building and maintaining a walking track and appropriate associated facilities may be undertaken in all zones, subject to a permit.

Construction of new walking tracks (including a long distance track) will be considered where it can be shown there is a real demand and where the proposal is consistent with the Visitor Management Guidelines, and any issue or area specific management plans.

Land managers or other proponents will be expected to prepare a walking track site plan prior to any new track being developed and will need to undertake an assessment of likely impacts on World Heritage values.

Private land holders wishing to design, construct and maintain walking tracks on private lands within the Area will be encouraged to conform with the objectives and standards of the Walking Track Strategy.

A Walking Track Co-ordinating Committee, to include the Authority, community representatives (including Aboriginal people, user groups and conservation representatives) and land managers, will be established to provide a co-ordinated approach to planning for and managing walking tracks in the Area and to develop a Walking Track Strategy. The Committee would:

- investigate opportunities for further short interpretive pathways and graded tracks;
- investigate opportunities for a range of walking track types, from short pathways to long distance trails extending out from the Cairns area, to meet the diverse needs of the large visitor and resident populations;
- investigate opportunities for developing walking tracks that pass through a range of different environments within the Wet Tropics World Heritage Area;
- investigate options for developing walking tracks focusing on Aboriginal and non-Aboriginal cultural themes, including use of Aboriginal trails in the Area;
- ensure a diversity of walking opportunities (including wilderness walks) is maintained in the Area;
- prepare a walking track construction and maintenance manual to provide a consistent guide for land managers and construction crews in the Area;
- ensure a co-ordinated approach to the development and distribution of information on walking opportunities in the Area; and
- investigate opportunities for long distance walks of international standard, providing routes can be developed to have minimal impact on World Heritage values.

3.6 *Wild and scenic rivers*

DESIRED OUTCOME...

The desired outcome is to have wild and scenic rivers in the Area managed to maintain or enhance their qualities consistent with protection of World Heritage values.

Background information

Many rivers in the Area can be identified as “wild and scenic”, given their outstanding ecological and scenic values. They provide valuable habitat for wildlife and recreation opportunities for increasing numbers of residents and visitors. Some rivers are used for substantial water extraction in their upper reaches before reaching the Area. Canoeing and kayaking clubs, the defence forces and a range of commercial operators make use of the Area’s wild and scenic rivers. The character, physical and social setting, site integrity and management intent for the Area’s wild and scenic rivers will be addressed in a Wild and Scenic Rivers Strategy.

Effective management may require restricting uses on some stretches of rivers. River-based tour operators generally agree that some regulation is essential for long-term viability of their industry. Safety is another major issue with hazards that include crocodiles, fast river flows and slippery rocks.

To help manage the wild and scenic rivers in the Area, a classification system will be developed based on catchment integrity, remoteness, modification of waterways and access.

Proposed policies and actions

The Authority will encourage a co-ordinated approach to management of rivers in the Area through Integrated Catchment Management and management of commercial operations.

The Authority will encourage scientific research and management of rivers with the aim of maintaining or enhancing their wild and scenic qualities.

A range of river-based opportunities, from developed high use areas through to wilderness areas, will be provided, consistent with a Wild and Scenic Rivers Strategy and the Visitor Management Guidelines.

Permits for commercial rafting companies will continue to be managed by the land holder or manager under conditions that adequately protect and present World Heritage values.

In developing a Wild and Scenic Rivers Strategy, a consultative approach involving the Authority, relevant land managers, Aboriginal peoples and commercial operators and the wider community will be established to provide co-ordinated management of wild and scenic rivers in the Area. Priority tasks include the need to:

- develop specific strategies for the use of popular sites, and examine the possibility of operators helping to fund site-hardening and construction of visitor facilities to minimise impacts on the environment;
- develop a code of conduct for river users which highlights minimal impact behaviour and safety;
- work with the rafting industry and Aboriginal peoples for better interpretation of cultural and natural values associated with wild and scenic rivers;
- develop and implement a monitoring program;
- ensure river access and egress points are managed to minimise river bank erosion and impacts on riparian (riverside) vegetation;
- support studies into aquatic ecosystems, riparian vegetation, management of estuarine systems and cultural values of wild and scenic rivers; and
- ensure the use of rivers by independent visitors is not unduly compromised by commercial activities.

3.7 *Visitor facilities*

DESIRED OUTCOME...

The desired outcome is to have visitor facilities designed, constructed and maintained in ways that minimise impacts on the Area and maximise presentation opportunities.

Background information

Providing a diverse range of quality visitor opportunities often requires support facilities, such as signs, car parks, picnic areas, interpretive displays, camping sites and toilets. These facilities need to be appropriately designed, constructed and maintained to maximise their presentation value and minimise their impact on the surrounding area.

There is a need for an innovative, cost effective and practical set of design, construction and maintenance guidelines which are sympathetic to the special attributes of the Area and encourage best practice.

Most visitors to the Area are day visitors who stay overnight at regional accommodation centres. Tourism studies have indicated there are many population centres close to the Area which provide the necessary infrastructure to support existing and future demands for accommodation. However, specialist accommodation on private lands in the Area, such as rainforest focused accommodation, may be proposed by land holders.

The needs of people of all ages, fitness levels and mobility is an important consideration when designing visitor facilities.

Policies and actions

Land managers will continue to have primary responsibility for the design, construction and maintenance of visitor facilities and to ensure the impacts of such facilities upon the Area are minimal.

The following have been identified as priorities for the management of visitor facilities:

- upgrading existing facilities where this will reduce impacts on World Heritage values;
- developing new facilities on lands adjacent to the Area where possible, to reduce pressure on sites where there are significant impacts on World Heritage values; and
- upgrading or developing facilities where there are opportunities to present World Heritage values with minimal impacts on the Area, consistent with the Visitor Management Guidelines.

The Authority will work with land managers to develop an agreed set of design, construction and maintenance standards for visitor facilities in the Area. The emphasis will be on cost effective designs that are sympathetic to the special attributes of the Area.

Visitor facilities will be designed, constructed and maintained in a manner sympathetic to their environment and consistent with the zoning scheme, Visitor Management Guidelines, Flora and Fauna Conservation Guidelines, and detailed management plans.

An assessment of likely impacts will be required before new visitor facilities are constructed in the Area.

Constructing major visitor facilities (e.g. interpretive centres, large buildings, cabins, etc.) requires a permit in Zones C and D, unless developed directly by the Department of Environment on protected areas.

Minor structures such as walking tracks and associated visitor infrastructure (including toilets and huts along long distance walking tracks) will be permitted in all zones where such infrastructure is deemed necessary for safety or environmental protection.

When considering approvals for visitor facilities, the Authority will consider the extent to which the proposed facility presents, and impacts on, the Area.

The Authority will work with the Department of Environment, Department of Natural Resources, local government, tourist operators, land holders and community groups to provide for the co-ordinated development of facilities in the Area. The Authority will consult with the Wet Tropics Tourism Liaison Group regarding the tourist industry's needs for visitor facilities within and neighbouring the Area.

Where facilities such as accommodation and car parking detract from the scenic appreciation or protection of World Heritage values, the Authority will encourage their development outside the Area and/or mitigation of their impacts. Preference will be given to developing such visitor infrastructure on land neighbouring the Area.

The Authority and land managers will work together to establish a comprehensive inventory of facilities in the Area suitable for people with disabilities as a basis for future planning and information programs. Land managers will be encouraged to provide information to the community about the availability of facilities for people with disabilities.

In the event of repeated concerns about the extent to which the design, construction and maintenance of visitor facilities in the Area conforms with agreed standards and priorities, the Authority will review funding policies and standards in association with land managers and land holders.

3.8 *Managing visitor impacts*

DESIRED OUTCOME...

The desired outcome is to have the number, location and type of visitor sites managed within predetermined standards so that they do not adversely affect World Heritage values while maximising options for presenting the Area.

Background information

The impact of visitors on the Area and the surrounding region is significant. The impact can be positive in terms of enhancing the local economy and increasing appreciation of natural values or it can be negative in terms of its effect on the natural environment and other people. Negative environmental impacts include trampling or clearing of vegetation leading to loss of soil and habitat, cultural heritage site degradation, disturbance of animal species, reduction in water quality and landscape alterations. Negative social impacts include crowding and congestion, which may reduce the quality of the experience sought by the visitor, conflict between incompatible activities and between visitors and the local community.

Flexible and innovative management, education of visitors and operators and proper site design can all assist in mitigating visitor impacts on the Area. However, there are thresholds where management (e.g. engineering) solutions begin to have an unacceptable impact on the natural or social character of an area. This threshold varies, depending upon the characteristics of the area. For instance, large paved carparks may be appropriate beside a major highway but not in a remote and natural area. In wilderness areas it may be more appropriate to use techniques such as education or modification of the type and amount of use to reduce impacts, rather than engineering solutions.

Proposed policies and actions

Where research or monitoring indicates the provision of visitor opportunities seriously threatens World Heritage values, the protection of threatened values will have precedence. While site design, management and visitor education comprise the preferred approach, in certain cases protection of values may require the partial or total exclusion of visitors from particular sites (e.g. during breeding activities).

The Authority will liaise with providers of visitor opportunities to minimise environmental impacts on the Area and social and cultural impacts on neighbouring communities, other visitors and cultural values within the Area.

The Authority will work with land managers and other providers of visitor opportunities to ensure that visitor impacts are monitored.

The Authority will work with the relevant management agencies to ensure sites are designed, assessed and managed in accordance with the principles of the Limits of Acceptable Change. This will require:

- identification of indicators by which changes in recreational settings can be measured;
- establishment of biophysical, social and management standards to be maintained for each site;
- identification of differences between the current and desired standards for each site; and
- action to minimise differences between current and desired standards.

Providers of visitor opportunities will be encouraged to liaise with local government to monitor both positive and negative effects that visitors to the Area may have on local communities.

Potentially conflicting activities will be separated wherever possible.

Appropriate visitor behaviour will be promoted through information and education programs, including minimal impact codes.

Whenever possible, marketing programs promoting use of northern Queensland and the Area should aim to foster visitor expectations and behaviour consistent with management objectives for the Area.

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4.1 *Collecting plants and animals*

DESIRED OUTCOME...

The desired outcome is to ensure collection of flora and fauna, whether for conservation and scientific purposes or for Aboriginal use, occurs in a culturally appropriate and ecologically sustainable manner.

Background information

Commercial, recreational, scientific, educational and traditional use of plants and animals can affect the Area. Collecting firewood can have significant impact through the removal of animal habitat, trampling vegetation, creation of access tracks and interfering with the natural decomposition rate of forest products into the soil. Various pieces of legislation have been enacted to provide protection while still allowing access and regulated use. Commercial forestry operations are prohibited by Commonwealth regulation under the *World Heritage Properties Conservation Act 1983*.

Under the *Nature Conservation Act 1992*, collecting for scientific and educational purposes is permitted in national parks, but commercial plant or seed collecting is not allowed. Commercial permits may be granted within state forests and timber reserves. State forests in the Area provide a significant source of genetic material for tree planting programs on private and public land, including the Community Rainforest Reforestation Program and the Wet Tropics Tree Planting Scheme.

Under the *Nature Conservation Act 1992*, species prescribed as protected wildlife are subject to regulations across all tenures. Under that Act, a person (other than an Aboriginal person under Aboriginal tradition) must not take a protected plant other than when it is permitted under a conservation plan, a permit, or an exemption under a regulation. Permission may be granted for the traditional Aboriginal use of natural resources in national parks. The wider community has expressed concern over hunting or harvesting of species within protected areas. The traditional Aboriginal use of natural resources is, however, important for indigenous peoples wishing to maintain their cultural relationship with the natural environment.

Traditional hunting and gathering is allowed in the Area if owners of land, including those owners of Aboriginal Deed Of Grant In Trust lands, provide access for this purpose and such use is allowable under the *Nature Conservation Act 1992*, or *Community Services (Aborigines) Act 1984*.

Section 56 of the *Wet Tropics World Heritage Protection and Management Act 1993* (which prohibits destruction of forest products) does not affect any rights Aboriginal people have in relation to forest products where these are provided for under the *Nature Conservation Act 1992* or another law. Traditional use may include, for example, collection of lawyer cane. Traditional use

of wildlife in the Area is governed by the *Nature Conservation Act 1992*.

In accordance with the principles established by the Law Reform Commission, the taking of particular species for traditional use may be restricted if the species is endangered, vulnerable or rare. Any such restriction should be provided for in a conservation plan established under the *Nature Conservation Act 1992*. These plans will be developed by the Department of Environment, in consultation with the Aboriginal peoples concerned. The plans may allow traditional use of protected plants by Aboriginal peoples, other than endangered plants, provided that such use is ecologically sustainable.

Fishing is regulated under the provisions of the *Queensland Fisheries Act (1994)* and is not regulated under this Plan.

There is increasing interest in collecting forest products for scientific and pharmaceutical research, particularly in exploring traditional Aboriginal knowledge of species with medicinal uses. This should be subject to the agreement of the Aboriginal people concerned.

Permission from the Commonwealth Minister for the Environment is required where timber salvage is proposed as a commercial operation.

Policies and actions

Following assessment of the likely impacts upon the Area and subject to existing laws, the Authority or land managers may permit seed collection in all zones. Generally, seed collection will be permitted where it is used for rehabilitation projects or to maintain genetic diversity in stock cultivated for conservation purposes on areas within or neighbouring the Area. Consistent with existing laws, strict conditions will be developed to ensure seed collection is ecologically sustainable. Seed collection for commercial purposes will be considered where there are no prudent and feasible alternatives and where direct or indirect benefits can be demonstrated.

The Authority discourages the use of dead and fallen timber for campfires. The use of alternatives such as portable fuel stoves or sawn timber provided by the land manager is supported.

Lawyer cane harvesting is not considered appropriate for the long-term protection of World Heritage values.

However, Aboriginal people who have a right to collect lawyer cane under another law, as a traditional activity, will be able to continue to do so. Any other person who was lawfully collecting cane immediately before this Plan may be permitted to continue, if the activity is consistent with rehabilitation plans for the area.

Land managers will be responsible for investigating reports of illegal flora and fauna collection and, in consultation with the Authority, may review existing measures for control of flora and fauna collection in the Area.

The Authority emphasises the need for consultation and negotiation with Aboriginal communities when developing policies concerning Aboriginal use of natural resources.

The Authority will, in conjunction with land managers,:

- investigate policies to allow Aboriginal peoples use of rainforest resources as part of Aboriginal land management practices in ways that do not threaten natural or cultural values;
- liaise with land holders, interested Aboriginal communities, the general community and government agencies and the Aboriginal and Torres Strait Islander Commission over the Aboriginal use of natural resources; and
- liaise with Aboriginal communities on the appropriate use of traditional knowledge.

4.2 Private land uses

DESIRED OUTCOME...

The desired outcome is to allow private land holders to enjoy the use of their properties in ways that have minimal adverse impacts on the Area.

Background information

About two per cent of the Area, comprising almost 200 separate lots, is freehold. A further 15 per cent is leasehold. These lands are generally referred to as private lands. Many of these land parcels are used, or may be used, for residential purposes. Many Permits to Occupy in the Area are for residential uses.

Most local government planning schemes provide for as-of-right uses for residential and associated domestic purposes. In some local government areas there are moves towards making residential uses (e.g. dwelling construction) a consent use (i.e. requires permission from the local government).

While some residential activities will be compatible with World Heritage management, clearing for building sites, access roads and tracks may all have negative impacts. The need for potable domestic water, disposal of sewage, potential disease transmission from domestic livestock (e.g. poultry disease transfer to cassowaries) and potential escape of domestic garden species, all need to be considered in the management of residential land uses within the Area.

Residents can play an important part in managing the Area, assisting with visitor management, scientific research, education, feral animal control and other management activities. Many private land holders specifically requested to have their land included in the Area during the listing process and many have excellent local and regional knowledge. Their observations and stewardship can add considerably to understanding and management of the Area.

Policies and actions

Most existing activities on private land will be recognised and allowed to continue under this Plan.

The Authority will be responsible for issuing permits for activities on private land such as clearing, where a permit is not required under other laws.

Private land holders will be guaranteed a permit for certain activities to allow them to enjoy the private residential use of their land. These include constructing a residence or driveway, creating a house garden, and collecting water for personal domestic use. Conditions may be attached to the permit to minimise detrimental effects on World Heritage values.

Private land holders will also be allowed to do any of the following activities if the activities cause no more than minor destruction of forest products or minor interference with earth or a watercourse:

- maintain a clearing around a residence or associated structure;
- drive a vehicle on a lawful access road to or on the land holder's land;
- maintain an existing garden, orchard or plantation or similar agricultural activity; or
- maintain an existing fence or firebreak.

A private land holder may also do any activity for the:

- protection of life;
- urgent protection of property;
- urgent control of a fire; or
- protection, conservation or rehabilitation of the Area's natural values.

Other activities not listed above which involve destroying forest products (native plants) may require a permit from the Authority, or may be prohibited.

Private land holders may dispose of waste on their land if disposing of the waste is otherwise lawful, there is no waste removal service provided, and if the nearest general waste disposal facility is more than 20km away by road.

4.3 Defence use

DESIRED OUTCOME...

The desired outcome is to provide for long term defence use, based on management practices consistent with the Primary Goal.

Background information

Department of Defence has a long history of responsible use and contribution to management in the Area which pre-dates World Heritage listing. Defence is committed to undertaking activities on a sustainable basis within the Area. Three sites within the Area are regularly used for military training exercises, research and equipment testing. These are Department of Defence Commonwealth freehold land near Cowley Beach (4769 ha) and west of Tully (1731 ha plus an additional 23473 ha of State Forest under special leases and a permit to traverse), and part of the Townsville Field Training Area (TFTA) (11600 ha of State Forest special lease). In addition, specific activities are undertaken in other parts of the Area on the basis of agreements with land managers (eg. State Forest areas under a permit to traverse and in national parks with conditional approval).

Defence use of the Area is acknowledged as an important component of the Australia-wide defence program. Defence activities are subject to Commonwealth legislation, most significantly the *Defence Act 1903*, as well as the *Environmental Protection (Impact of Proposals) Act 1974*, *Australian Heritage Commission Act 1975*, *Endangered Species Protection Act 1992* and *National Environmental Protection Council Act 1994*. The Authority recognises existing Commonwealth processes and Defence's legitimate interests while at the same time seeking a high degree of environmental protection during defence activities. Defence's approach to environment and heritage protection is set out in Defence Instructions. These point out that as a Commonwealth agency, Defence is not generally bound by State and Territorial legislation and local government ordinances. However, in the absence of Commonwealth legislation, it is Defence policy to comply in spirit with the standards, guidelines, procedures and practices set down under such laws. The Department of Defence endeavours to manage all defence controlled land and conduct defence activities in an environmentally responsible manner.

Defence undertakes a range of activities within the Area, including infantry minor tactics in close country (jungle), survival training, navigation exercises, small arms live firing, amphibious exercises, adventurous training, equipment testing and exposure trials and environmental research into defence impacts. Defence activities are accepted as a legitimate use and when carefully managed can occur in the Area on a sustainable basis. Having minimal impact on the environment is a key element of defence activities.

As an organisation committed to sustainable use of the Area, Defence has prepared a procedural document detailing military training on non military lands and is preparing environmental management plans (EMP) for each Defence managed property in the Area.

Public access to areas used by Defence for defence training purposes will be restricted for safety reasons. Such areas are marked on the zoning maps and the visitor management guidelines map.

Policies and actions

The Authority is committed to working with Defence through a process of consultation and cooperation.

Defence activities in the Area will be based on agreed Defence Use Management Codes of Practice for the whole of the Area and approved environmental management plans for each Defence managed property.

Defence use of the Area outside Defence land will be subject to the permission of the land manager. Any authority or permit for defence use will include consideration of criteria established for Defence Use Management Codes of Practice. Land managers will be requested to consult with the Authority when considering proposals for major defence activities within the Area.

Defence Use Management Codes of Practice will address such issues as:

- the use of weapons and explosives;
- contribution to the protection, conservation and rehabilitation of the World Heritage values of the Area;
- access; and
- maintenance of roads and land areas.

In development of Defence Use Management Codes of Practice, the advice of the Department of Environment will be sought where activities involve the taking of plants and animals. Existing arrangements between Defence and land managers that adequately address the above considerations (e.g. existing environmental management plans) may be adopted or used as the basis for Defence Use Management Codes of Practice. The Department of Defence will use the expertise of scientific researchers to gain a better understanding of environmental impacts and management requirements for defence activities in the Area.

Agreed Management Codes of Practices may form the conditions for generic permits issued for Defence use of parts of the Area.

Prior to the development of agreed Management Codes of Practice, Defence will obtain a permit from the Authority for particular activities which involve clearing of vegetation or other significant impacts on World Heritage values. It is not the intention of the Authority to deny the issue of such a permit but it may request that certain conditions be adhered to.

Where defence activities may have adverse effects on World Heritage values, the Authority will seek Defence cooperation in examining opportunities to phase out or modify such activities, or look for alternative locations.

4.4 *Communications facilities*

DESIRED OUTCOME...

The desired outcome is to have a net reduction in the impact of communications facilities within the Area.

Background information

Public and private telecommunications facilities in the Area include microwave and radio repeaters, marine and aeronautical safety radio repeaters and beacons, fibre optic cables, meteorological and radar installations and radio and television broadcast systems. An aerial cableway gives access to the top of Mt Bellenden Ker for maintenance of regional communications equipment.

Mountain peaks, the most sought-after sites for telecommunications facilities, are often ecologically fragile and vulnerable areas with extremely high conservation values. Ridgelines and peaks are also often the most sensitive sites in terms of scenic amenity.

Policies and actions

All known existing telecommunications facilities are shown on the zoning maps.

Maintaining a structure, including a communications structure, facility or access requires a permit in all zones. Building new structures is not allowed in Zone A.

The Authority may issue a permit for construction of a new facility within Zone B only where it is satisfied the installation will allow rationalisation of existing facilities with a demonstrable net reduction in impacts on the integrity of the Area.

In deciding permit applications the Authority will liaise with Air Services Australia to ensure air safety is taken into account.

No new roads will be allowed to existing or proposed telecommunications facilities on mountain summits and other sensitive areas. Where feasible, existing roads and tracks to mountain top telecommunications facilities will be closed and rehabilitated.

Helicopters are the preferred means of access, but clearing for landing pads must be kept to an absolute minimum and will be subject to a permit.

The Authority encourages multiple lease of tower sites to reduce their number and overall impact.

The Authority will consult with each manager of telecommunications facilities within the Area, ascertain which maintenance activities have potential impacts on World Heritage values and advise the manager of the requirement for either a permit or approved management codes of practice.

Transport and Public Utility Management Codes of Practice will be developed. These will be formalised practices and procedures agreed to by the agency responsible for the maintenance of the public utility and the Authority.

Transport and Public Utility Management Codes of Practice must adequately address:

- protection of the integrity of the Area;
- maintenance procedures, including access requirements, the use of quarries and disposal of waste and forest products;
- rehabilitation of disturbed areas;
- protection of the scenic resource;
- control of weeds;
- use of chemical products;
- conservation procedures, including controls on clearing of vegetation, canopy disturbance, and habitat fragmentation;
- visitor management procedures;
- emergency and safety operations procedures; and
- monitoring and reporting procedures related to the management codes of practice.

Existing leases, licences or other agreements that adequately address the above considerations may be adopted or used as the basis for Transport and Public Utility Management Codes of Practice.

4.5 Mining, quarrying and fossicking

DESIRED OUTCOME...

The desired outcome is to have a net reduction in the impact of mining, quarrying and fossicking operations in the Area and an ultimate cessation of all mining.

Background information

Mining, mineral exploration (other than geological and geomorphological research), quarrying and the impact of associated access and living areas is generally incompatible with sound conservation management of the Area. Mining and quarrying operations can involve adverse environmental impacts, such as clearing or undermining vegetation and reducing water quality of adjacent watercourses, usually through contaminated run-off, increased turbidity and sedimentation. These operations may also create undesirable noise, dust and traffic and visually intrusive scars in natural areas. Transport associated with these activities may also increase road maintenance costs.

The number of mining tenures in the Area has more than halved since World Heritage listing in 1988. As of February 1997, 3 mining leases, 3 mining claims, 1 mining lease application and 26 quarries remained in the Area. Quarries, mining leases and mining claims are identified on the zoning maps. Many quarries in the Area have not been used since listing and require rehabilitation.

Eductor dredging (gold diving) is the mining of gold from streams and river beds using a small dredge operated by a person diving with scuba or hooker. Both eductor dredging and fossicking are considered incompatible with management of World Heritage values.

The *Mineral Resources Act 1989* recognises the Authority as a “land owner” entitled to object to mining proposals in the Area.

Policies and actions

Mining and quarrying operations are allowed under the terms and conditions of any lease, licence, permit or other legal authority under the *Mineral Resources Act 1989*.

Quarrying material in the Area requires a permit from the Authority. Permits will not be issued for Zones A and B.

The right of the Department of Environment to use quarry material for conservation management activities is not constrained by these policies, providing it is consistent with national park management principles and the management purpose of the zone.

Given that mining is incompatible with sound conservation management of the Area, new mineral exploration, mining, quarrying or fossicking activities within the Area will not be endorsed. The Authority may, for limited periods and subject to strict controls, endorse such activities in highly disturbed areas where the plan of operations includes the prompt restoration of the whole of the disturbed area.

Where exploration activity within the Area is sought as a consequence of exploration outside the Area, non-damaging exploration activities, such as water sampling, remote sensing, small rock samples etc., may be allowed under a scientific research permit where required by the land manager. Approval to conduct this type of research should in no way suggest approval or support for future mining in the Area.

Mining and Quarrying Management Codes of Practice will be developed between the Authority and the mine or quarry operator and will adequately address:

- protection of the integrity of the Area;
- control of weeds, feral animals and erosion;
- use of chemical products;
- disposal of earth, forest products and waste;
- access;
- rehabilitation of disturbed areas; and
- management of run-off (while the activity is carried on and after the activity has ended).

Plans of operation that adequately address the above considerations may be adopted or used as the basis for Mining and Quarrying Management Codes of Practice.

Fossicking and eductor dredging are not allowed in the Area.

4.6 Grazing

DESIRED OUTCOME...

The desired outcome is for grazing to occur only on land where it contributes to World Heritage management and to be phased out as leases expire.

Background information

While grazing of domestic stock is generally incompatible with the goals of World Heritage Area management, the Authority respects the existence of grazing tenures issued over land prior to World Heritage listing. There are 37 grazing properties consisting of 10 pastoral holdings, 20 special leases, 5 annual occupation licences and 5 stock grazing permits issued by the Department of Natural Resources. The term of these tenements is variable. Under present arrangements, 17 special leases will continue beyond the year 2000, with the longest to continue to the year 2037.

The leased lands in the Area often adjoin and/or are part of adjacent pastoral areas. Grazing tenement boundaries often include extensive rainforest areas unsuitable for grazing of stock. In some circumstances, grazing activities can assist with World Heritage management (e.g. fire management). Recently renewed leases and permits within the Area have included only open forest (i.e. land suitable for grazing) in the lease or permit. This is preferable for World Heritage management. The conditions of the leases vary with regard to public access rights and other management activities. Applications for renewal of grazing leases are considered by the Department of Natural Resources.

Policies and actions

Each application for renewal of lease will be referred by the Department of Natural Resources to the Authority for comment. The Authority will make a recommendation to the Department of Natural Resources based on an evaluation of the lease to determine the present level of sustainability and mechanisms to improve the sustainability of the activity. Detailed criteria for dealing with lease renewals and/or proposed boundary amendments will be developed with relevant agencies and industry representatives. The Authority's concerns are likely to relate principally to those leases or parts of leases

- covered by rainforest
- consisting of steep slopes
- containing rare and threatened species.

Suggested amendments to lease boundaries are likely to be based on sensible fire and land management boundaries, including watercourses or existing tracks. Any specific amendments will be negotiated with leasees. The final decision, however, is made by the Department of Natural Resources. Native title issues will be taken into account in making the final decision.

Where a grazing tenement is located on the Area boundary (and most of the tenement is outside the Area), small parts of the tenement within the Area may be renewed.

Grazing animals (other than in a rainforest) is allowed in all zones if the grazing is otherwise lawful.

Controlled burning other than in a rainforest is allowed in all zones if the burning is otherwise lawful.

Co-operative management agreements over stock-control fencing will be sought where required for sound management of the Area.

The Authority will liaise with the Department of Natural Resources regarding:

- renewal of expiring grazing leases and licences;
- the terms and conditions of grazing licences and leases and the compliance with, in particular, management codes of practice and/or regulations concerning burning, use of forest products and the use of the area for public purposes; and
- the condition of the grazed area.

The Authority will liaise with land managers and land holders to provide for:

- special protection of natural or cultural sites;
- co-operation and control of illegal grazing;
- visitor access and management; and
- rehabilitation and appropriate management of the lease area on permit expiry.

4.7 *Beekeeping*

DESIRED OUTCOME...

The desired outcome is to have beekeeping activities managed to minimise the impacts on World Heritage values.

Background information

The beekeeping industry is of major economic value and is an essential part of the State's primary production system. A number of horticultural crops grown in North Queensland depend on honey bees for successful cross pollination. The success of the expanding horticultural industry in North Queensland is dependent on an adequate supply of honey bees to provide pollination services.

Beekeeping relies on native flora, particularly eucalypts, for over 90% of its production resource. Localities important to the beekeeping industry, some with a long history of industry use, have been included in the Wet Tropics World Heritage Area. These localities are on the western fringe of the area, outside rainforest, in sclerophyll forests.

The industry asserts continued access to these areas is critical to maintain its success in North Queensland and that such success is vital to the adequate supply of bees for pollination in the area.

The following policies are consistent with the Queensland Department of Environment Protected Area Policy Manual "Beekeeping on Protected Areas".

Managed beekeeping activities currently occur in the Area on the western fringe in dry sclerophyll forests. The prime requirement of beekeepers in periodically locating bees in these areas is for the rebuilding of vigour in bees which have been utilised for pollinating of horticultural crops.

The effects of feral bees on the Area's World Heritage values may include reduced nectar and pollen supply for native fauna, especially birds and insects; reduced pollination of native plants, especially those adapted to pollination by birds; increased hybridisation of some native plant species; and the long term decline in abundance of native pollinators.

The impact of managed honey bees on native flora and fauna is a matter of debate.

Possible environmental impacts of beekeeping on protected areas include:

Impacts relating to the keeping and moving of hives

- the need to keep tracks open for truck access;
- the need for a clear area around the hives to protect them from fire; and,
- incidental effects (which may be minimised through cooperative management) such as rubbish and impacts from beekeepers driving into and servicing the hives.

Ecological impacts

Scientific opinion has been divided as to the extent of the impact of bees on natural ecosystems. Areas of concern include:

- increased hybridisation of native plant species (and therefore a loss of genetic diversity);
- competition for nectar supplies with birds, native insects and nectar-feeding bats, leading to their long-term decline;
- possibility of disease transmission; and,
- reduced pollination of some native plants, especially those adapted to pollination by birds.

Beekeeping usually involves the migration of bees from site to site, depending on the availability of forage resources, so apiary sites on protected areas are unlikely to be occupied all the time. This aspect of beekeeping can minimise its environmental impacts.

Social impacts

Social impacts may arise due to incompatibility between recreational use and bees, particularly around picnic areas.

Beekeeping is not allowed on national parks, under the *Nature Conservation Act 1992*, but is a permitted activity on Conservation Parks and Resources Reserves

Proposed policies and actions

Beekeeping permits will only be considered for those apiarists registered under the *Apiaries Act 1982*.

Beekeeping is a permitted activity in Zones C and D.

Applicants for beekeeping permits will be encouraged to consider prudent and feasible alternatives outside the Area.

Beekeeping may be permitted on private lands in the Area but expansion of beekeeping activities into rainforests, national parks, or Zones A and B will not be allowed.

Beekeeping management issues in the Area will be addressed by a Liaison Committee consisting of industry, the Authority and land managers. This committee will develop a Code of Practice for beekeeping to minimise the potential adverse impacts of beekeeping in the Area, including by defining appropriate locations and seasons for occupancy, consistent with beekeepers needs and surplus pollen and nectar producing periods. The Code of Practice will also detail appropriate conditions for permit issue, renewal or extension of permits, and re-allocation of sites.

4.8 Farming

DESIRED OUTCOME...

The desired outcome is for agriculture, horticulture, aquaculture and mariculture within the Area to have minimal adverse impacts.

Background information

Commercial agriculture and horticulture within the Area are limited to freehold and leasehold lands. Agricultural and horticultural practices may have significant impacts upon World Heritage values through clearing native vegetation, use of herbicides, insecticides or fertilisers and/or regular disturbance of the soil surface, ploughing or vehicle tracks, which may cause erosion and contribute to siltation.

Aquaculture and mariculture occur at two locations within the Area. There are some operations near the boundaries of the Area. Aquaculture and mariculture can have significant impacts upon the environment through clearing, changing drainage patterns and waste and effluent production and disposal.

Policies and actions

Planting, cultivating or propagating an undesirable plant (see Schedule 2) will not be allowed in the Area. Killing or disposing of an undesirable plant may be permitted with appropriate conditions.

The Authority will liaise with land holders with existing use rights for agriculture, horticulture, aquaculture and mariculture activities in the Area in a bid to minimise impacts on World Heritage values. Where appropriate, this may involve the development of co-operative management agreements with land holders.

Existing farming activities will be allowed to continue in the Area where they cause only minor destruction of forest products or interference with earth or a watercourse. Permits will be required for existing farming activities that involve more than minor destruction of forest products or minor interference with earth or a water course.

The Authority will consult relevant government authorities which regulate aquaculture and mariculture operations adjacent to the Area to identify ways to reduce any impacts on World Heritage values.

4.9 *Water storage, diversion and extraction*

DESIRED OUTCOME...

The desired outcome is to minimise the impacts of water storage, diversion and extraction on World Heritage values.

Background information

Water storage, diversion and extraction and consequent alterations to natural flow regimes have the potential to affect World Heritage values. Water flows within the Area are affected by dams on the Tully and Barron rivers and by private water extraction for agricultural and domestic use.

Most of the water supplies for towns and cities from Cooktown to Townsville are derived from catchments which are wholly or partly within the Area. As the population of northern Queensland increases due to tourism and an influx of new residents, so too will the demand for adequate water supplies to service urban areas. Changes in the agricultural industry, with additional areas being developed or put under irrigation, will also affect water demand.

Water extraction during drought periods is a major concern because community demand is highest when availability is lowest.

Plans to further develop supplies from Behana Creek, Mulgrave River, Copperlode/Freshwater Creek, Barron River and Flagggy Creek are now being considered to cope with anticipated demand.

The *Water Resources Act 1989* regulates taking, use and diversion of surface water. Under the Act, permits or licences are required to extract water by gravity, pumping or diversion. There are 71 private surface water extraction sites within the Area and most of the water is pumped to properties outside the Area. The extent of ground water (sub-artesian) extraction in the Area is not known and there are no restrictions under the *Water Resources Act 1989*. However, permits or approval for the extraction of water may be required from the land manager.

Policies and actions

The level of water use from the Area by urban and rural developments will be constrained by the available, sustainable supply of water.

Water extraction operations must maintain adequate flow regimes (including seasonal variations, pulses and flooding) and water quality for the ecological requirements of the Area's watercourses.

The Authority will liaise with the Department of Natural Resources, Integrated Catchment Management committees and Stanwell Corporation Limited to ensure adequate flow regimes are maintained.

The Authority will work with relevant agencies to develop and implement management codes of practice for maintenance of water supply infrastructure in the Area where the activity involves clearing or other potential impacts on World Heritage values.

The Authority will encourage co-ordinated water conservation programs such as Water Wise aimed at reducing urban water demand.

The Authority will liaise with the relevant management agency to resolve any instance of unlawful extraction of water from the Area and ensure existing infrastructure is managed to minimise impact on the Area.

Construction of weirs, pipelines, bores, pumping stations and other such structures within the Area requires a permit from the Authority. These structures are not allowed in Zone A, except where there is an existing use right. New water storage, diversion or extraction facilities may be permitted in Zone B only where it would reduce impacts on the Area's integrity. Where there is an identified critical need for community water supply infrastructure on lands currently zoned B, Local Government may apply to the Authority for a plan amendment (to rezone the relevant area to Zone C). An environmental impact statement and public consultation will be required. A Local Government may appeal a decision by the Authority not to commence the Plan amendment process. Permits for water storage, diversion and extraction in Zones C and D will require consideration of all prudent and feasible alternatives, including the use of demand management and water conservation strategies (e.g. grey water use, rain water tanks, etc.).

Extracting water for personal domestic use is permitted in all zones. In the case of private landholders, the Authority must issue a permit, but may attach conditions to mitigate any adverse impacts on World Heritage values.

4.10 Electricity infrastructure

DESIRED OUTCOME...

The desired outcome is to have a net reduction in the impact of electricity infrastructure on the Area.

Background information

Demand for electricity supplies to service urban areas in northern Queensland is increasing with the expanding population and the continued growth in tourism. Hydro-electricity supply facilities in the Area include the Barron Gorge and Kareeya (Tully Gorge) power stations and the Chalumbin sub-station. There are more than 300km of transmission lines in the Area.

Electricity facilities can have substantial harmful impacts on World Heritage values, especially in relation to powerlines, associated corridors of slashed vegetation and vehicle access tracks for maintenance purposes. The corridors occupy large areas and deplete habitat otherwise available for wildlife. These corridors and maintenance tracks facilitate the spread of weeds, diseases and feral animals. Another consequence is fragmentation of habitats. Corridors can inhibit animal movement, leading to possible extinctions of small populations of animals, a long-term reduction in animal species viability and reduction in the dispersal of seeds and pollen by animals.

Members of the former Queensland Electricity Supply Industry (QESI), including government owned electricity generators, distributors and suppliers, have developed a management code of practice covering electricity supply maintenance activities within the Area. The code addresses specific maintenance procedures, including erosion control, vegetation management, cultural heritage management, visual quality maintenance, pollution control, co-operative research and trials and emergency procedures.

Policies and actions

The Authority and QESI will revise and update the existing code of practice at regular intervals.

New electricity infrastructure will not be permitted in Zone A. New electricity supply infrastructure will be considered in Zone B only where it has a demonstrable net reduction in impacts on the integrity of the Area (e.g. replacing two separate existing powerlines with one new line) and prudent and feasible alternatives have been considered. In general, preference will be given to reticulation schemes which amalgamate existing services and result in a net reduction of impacts on the integrity of the Area.

An environmental impact assessment (EIA) which addresses the likely impacts of proposed developments upon the Area will form the basis for the Authority's consideration of a permit application. The EIA should consider any prudent and feasible alternative locations or methods for the proposed development.

Where an agreed Management Code of Practice exists, this may form the basis of permit conditions, allowing issue of long term permits for maintenance activities.

The Authority seeks co-operation with the relevant electricity transmission and distribution organisations to ensure electricity installation design, construction and maintenance have minimal impacts on World Heritage values. Options to be investigated include techniques which could be employed to reduce habitat fragmentation, visual impacts, weed dispersal and introduction of feral animals.

While the use of off-grid remote area or alternative power supplies for small communities is encouraged as an alternative to grid reticulation, potential negative implications such as fuel spills gas emissions and clearing of vegetation for infrastructure need to be carefully considered.

Aerial bundled cable powerline systems or underground power supplies should also be considered as alternatives to traditional powerlines in order to minimise clearing requirements and impacts on scenic values at specific locations.

In consultation with electricity supply managers and land managers, the Authority will develop and implement strategies for managing and rehabilitating degraded areas within electricity supply corridors which significantly impair the conservation or presentation of World Heritage values.

4.11 Roads and access corridors

DESIRED OUTCOME...

The desired outcome is a road network which provides appropriate and safe access for residents, visitors and managers and which is managed to reduce net impact on the Area.

Background information

Roads in the Area are used for recreation, tourism, education, land holder access and access to public utilities. Some are part of a regional network linking urban areas and major highway systems throughout northern Queensland. Roads play an important role in management of the Area by providing access for activities associated with conservation and research, and access for visitors to enjoy and appreciate its heritage values.

Roads and traffic can have substantial harmful impacts on the Area by occupying and fragmenting wildlife habitat, leading to road kills, contributing to erosion, sedimentation and pollution of land and stream habitats and facilitating the spread of weeds, diseases and feral animals. Roads can inhibit or prevent movement along important wildlife corridors, restricting available gene pools and ultimately affecting the evolution of individual species. Fragmentation of habitats isolates small populations of animals and can lead to inbreeding, reduction in species viability and reduced dispersal of seeds and pollen.

Queensland Department of Main Roads, in conjunction with the Authority, is developing standards for road maintenance in the Area with a view to reducing road and traffic impacts on World Heritage values. Road classifications developed for this Plan are intended to rationalise the extensive road network within the Area. The aim is a more cost-effective and manageable transport system which meets community needs and does not compromise management of World Heritage values. The classification system identifies the proposed priority function of each road (see Table 5). In many cases, each class of road also has legitimate secondary functions. For example, some State-controlled roads have presentation value for recreation and tourism. The zoning maps show the Area's proposed road network and the management classes for roads. Responsibility for maintenance and access to roads has historically been controlled by a number of land management agencies and this Plan will not change such existing arrangements. Department of Environment and Department of Natural Resources for example may place restrictions on access to certain roads (e.g. a permit may be required to access forestry roads) and the process for applying for permits will not be changed by the Wet Tropics Plan.

Although the Plan does not envisage the building of new roads in the majority of the Area, transport studies indicate it is likely there will be demands for significant upgrading of the Kennedy, Bruce, Rex, Palmerston, Captain Cook and Gillies highways and several other roads within the next 10 years to cope with the expected regional traffic demand.

Table 5. Road classes

<p>State-controlled road: Roads which form part of the State's road network (113km) (shown on maps).</p> <p>Community access road: Significant roads for local community transport (159km) (shown on maps).</p> <p>Presentation (unrestricted) road: Roads which provide opportunities for presentation of World Heritage values to vehicle-based visitors (244km) (shown on maps).</p> <p>Presentation (restricted) road: Presentation roads where public access may be restricted and a permit is required (244km) (shown on maps).</p> <p>Land holder access road: Roads to provide the land holder with access to and within private and government-controlled lands in or adjacent to the Area (191km) (not shown on maps).</p> <p>Management road: Roads to provide access for essential conservation management and research and for authorised vehicles to service public utilities. Use of these roads by the public or by commercial tour operators is not considered appropriate (334km) (shown on maps).</p> <p>Rehabilitation road: Roads to be closed to motorised vehicles and rehabilitated (98km) (not shown on maps).</p>
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Many of the roads proposed to be rehabilitated are former logging tracks that are no longer required for management or visitor use or which have unacceptable impacts on the integrity of the Area.

Roads and tracks are important to the tourism industry. The Wet Tropics Ecotourism Strategy will address vehicle access and ecotourism opportunities consistent with this Plan.

Policies and actions

Classification of Roads

Roads and tracks within the Area will be managed consistent with the zoning scheme and the Flora and Fauna Conservation Guidelines (see section 2.1).

Unclassified roads and Rehabilitation roads (e.g. old logging tracks) will remain closed to motorised traffic, and be rehabilitated as soon as practicable.

Current access arrangements to and within private lands along existing roads will be allowed to continue. However, any upgrading will require a permit from the Authority and will be subject to consideration of likely impacts upon the Area. Upgrading will be permitted only in Zones C and D.

The Authority will liaise with Airservices Australia to ensure that the need for 24 hour all weather access to navigation sites is taken into account.

Upon expiry of any lease or licence or other change in circumstances, the Authority may reassess the designation of any road or track in the Area.

Where rehabilitation of tracks is required to protect World Heritage values, the Authority, in conjunction with land managers, local government, the tourism industry and local communities, will develop strategies to minimise the impact on commercial operators (e.g. seeking funds to provide alternative access and visitor sites, providing sufficient time for relocating uses etc.). Changes will be phased in and where possible assistance provided to develop alternative opportunities.

Vehicles may travel on roads not shown on the zoning map only with the permission of the land holder where lawful access to the land exists. Access to parts of the Wet Tropics Area may also be controlled under laws other than this Plan. The provisions of the Plan do not exempt people from the requirement to obtain permits from other government agencies where these are required under other laws. An example is the requirement to obtain a permit to traverse State Forests from Department of Natural Resources.

Land managers may temporarily or permanently close roads (other than dedicated roads) to prevent damage to the Area, to the road surface, for public safety or other reasons (e.g. during wet weather). Intending road users should check with the relevant government land manager.

Road design, construction and upgrading

The Authority will work with Department of Main Roads, Department of Natural Resources, local government and other road management agencies to ensure road design, construction and maintenance have minimal impacts on World Heritage values.

Options for investigation include techniques to reduce habitat fragmentation, road kills, visual impacts, weed dispersal, erosion and sedimentation of watercourses.

Road construction works involving substantial upgrading, road widening, realignment, re-routing or establishment of new roads within the Area will require a permit from the Authority. Permits will be issued only within Zones C and D.

A permit may be issued for road construction and upgrading, works only where there is no prudent and feasible alternative, or no net detriment to the Area.

No new public road construction works will be permitted in Zones A or B (unless, in the case of Zone B, the new road would reduce impacts to the Area's integrity).

Construction of an access to a private dwelling will be permitted, but conditions may apply.

New roads should be considered only where it can be shown that there is a real demand and where the proposal is consistent with the intent of the zoning scheme or more detailed area-specific management plans. However, a permit will still be required from the Authority and some conditions may apply.

Road maintenance

Road maintenance operations will require a permit from the Authority. Road Management Codes of Practice may form conditions for permits.

Road Management Codes of Practice are formalised practices and procedures agreed to between a road maintenance agency and the Authority. Road Management Codes of Practice will adequately address:

- road design and maintenance operations;
- access arrangements, including seasonal closures;
- emergency and safety operations;
- monitoring and reporting procedures;
- conservation procedures, including controls on clearing of vegetation and canopy disturbance;
- visitor management procedures;
- rehabilitation of disturbed areas;
- protection of scenic and cultural resources;
- control of weeds;
- use of chemical products;
- construction standards of specific roads or sections of roads;
- source of any fill or gravel to be used;
- disposal of earth and forest products; and
- control of erosion and drainage.

In consultation with road management agencies and, where appropriate, road users (including commercial operators), the Authority will develop strategies for managing and rehabilitating degraded roadside vegetation which significantly impairs the conservation or presentation of World Heritage values.