

**APPLICATION OF  
IUCN PROTECTED AREA  
MANAGEMENT CATEGORIES**

**DRAFT AUSTRALIAN HANDBOOK**

WCPA Australia and New Zealand Region March 2000

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This draft handbook has been through several rounds of comments from State and Territory nature conservation agencies through the forum of the Australian and New Zealand Environment and Conservation Council (ANZECC). WCPA wishes to acknowledge the helpful and detailed comments provided by these agencies.

The examples of Australian protected areas which appear in Appendix 1 are based on information provided by State and Territory conservation agencies and the assistance of these agencies in providing this information is gratefully acknowledged.

While ANZECC agencies have provided extensive assistance with the preparation of this Handbook, it has not as yet been formally considered or endorsed by ANZECC. It does not therefore necessarily represent the views of ANZECC or its member Ministers or agencies.

# **1. INTRODUCTION**

## **1.1 Purpose of Handbook**

This handbook aims to assist the application in the Australian context of the 'Guidelines for Protected Area Management Categories' which were adopted and published by the International Union for the Conservation of Nature and Natural Resources (IUCN) in 1994. IUCN, now known as the World Conservation Union, brings together governments, their specialist agencies and local, national and international non-government bodies concerned about nature conservation to consider problems and devise strategies to facilitate conservation of nature throughout the world.

The IUCN Guidelines are designed for application internationally and therefore need to employ a degree of generality. Consequently, the development of subsidiary guidelines which provide for a more local focus and clarification of local issues was envisaged by IUCN during their development. Consistent with this intention, the primary purpose of this handbook is to provide further explanation to the IUCN Guidelines and, more particularly, to provide interpretation to them for the particular circumstances that apply in Australia. The handbook will be primarily used by protected area managers to classify protected area systems against the IUCN Guidelines in a consistent manner. Additionally, it is envisaged the handbook will be useful in providing further explanation of the IUCN Guidelines to all parties interested in the development of protected area systems.

While the handbook has been developed as a stand-alone document, it is emphasised that it is not designed to replace the 1994 publication describing the IUCN Guidelines. That remains the primary reference and the present handbook should be therefore regarded as complementary to that publication.

## **1.2 Background to Handbook**

The preparation of an Australian handbook to the IUCN Guidelines was suggested and endorsed by the delegates to the Technical Workshop *Application of IUCN Protected Area Categories in the Australian Context*, which was held at Robertson, NSW from 27 to 30 June 1994. The Workshop was co-hosted by the Australian Nature Conservation Agency (ANCA) and the NSW National Parks and Wildlife Service and endorsed by the Standing Committee on Conservation of the Australian and New Zealand Environment and Conservation Council.

The Workshop was attended by a variety of practitioners from the Australian region and by representatives of the World Conservation Monitoring Centre and the IUCN Commission on National Parks and Protected Areas (CNPPA). A Report of the Technical Workshop was prepared and circulated by ANCA and the NSW National Parks and Wildlife Service in September 1994.

## **1.3 The IUCN Categories**

The IUCN Guidelines have been developed through the CNPPA as a mechanism to facilitate communication and exchange of information relating to protected areas and also as a means of assessing the status of the global network of protected areas. The IUCN, through the CNPPA, has been actively involved in the provision of advice on protected areas and preparation of classification systems for protected areas for many years. The present category system was adopted by the IUCN at its General Assembly in Buenos Aires in January 1994 and were published later that year (IUCN, 1994). The category system represents the culmination of an extensive process involving a wide-ranging review within the international protected area constituency over a number of years. The categories are summarised in *Appendix 2, Table 1* which is presented in fold-out form. The 1994 classification provides international standards for collection, handling and dissemination of data about protected areas. The practical benefits of adoption of this classification include:

- \* provision of national and international standards for collection, handling and dissemination of data about protected areas;
- \* classification of each protected area according to the objectives for which it is being managed, regardless of nomenclature;
- \* storage of internationally comparable data by agencies such as the World Conservation Monitoring Centre;
- \* the ability to provide consistent technical advice to international protected area programs including the UNESCO Man and the Biosphere Program, the World Heritage Convention and the Ramsar Convention.

## **1.4 Protected Area Systems in Australia**

It is important to recognise that the term 'protected areas' (as defined by IUCN, refer to page 6) is restricted to those areas formally established primarily for biodiversity conservation and only encompasses a small component of the land/seascape. There are many areas which also play an important role in conserving biological diversity but which fall outside the scope of the IUCN Guidelines. While such areas could be considered as 'supplementary conservation areas' to the core systems of protected areas, nevertheless they are not the subject of this handbook.

There are more than 50 types of protected areas in Australia managed by nineteen different State, Territory and Commonwealth management agencies. ANCA periodically publishes a listing of Australian terrestrial and marine protected areas which in 1992 (for the first time) reported on the IUCN category for each listed site, using the draft IUCN system (Hooy and Shaughnessy, 1992). The World Conservation Monitoring Centre, in collaboration with the IUCN, regularly publishes an analogous United Nations List of National Parks and Protected Areas (IUCN, 1994) to which Australia contributes.

A number of important national agreements including the Intergovernmental Agreement on the Environment, the National Strategy for Ecologically Sustainable Development (ESD), the National Strategy for Conservation of Australia's Biological Diversity and the National Forest Policy Statement recognise the importance of a comprehensive, adequate and representative terrestrial and marine reserve system within Australia. However, there is a need to provide a clearer assessment of the variety and adequacy of the existing reserve networks before such a system can be fully established. The National ESD Strategy in particular recommends clarification and publication of categories of protected areas within Australia.

## **1.5 Use of the IUCN Guidelines**

The large number of designations applied to protected areas in Australia, which has resulted from each State and Territory and the Commonwealth having its own legislation and nomenclature, has in the past made comparative analysis of protected area systems throughout Australia difficult. Obstacles include a lack of universally accepted terminology, application of existing terminology in different ways, and varying statutory provisions between jurisdictions. The existence of a widely understood and accepted classification system such as the IUCN Guidelines can assist the analysis of the existing protected area estate in Australia by State and Commonwealth agencies.

The IUCN Guidelines therefore represent a strategic management tool for analyses of protected area systems. At the State level, experience has suggested that the IUCN Guidelines can:

- \* allow identification of reserves where resource documentation is lacking or where management objectives are unclear;
- \* identify potential management conflicts within and between reserves; and
- \* provide a consistent overview of reserve attributes and management objectives across a State.

At the Commonwealth level, the IUCN Guidelines can provide an enhanced basis for the preparation of national reports on the Australian protected area estate, and for contributions to international listings of protected areas, using categorisations provided by the States and Territories.



## **2. INTERPRETATION**

### **2.1 General Issues**

The IUCN Guidelines for Protected Area Management Categories (IUCN, 1994) provide information designed to achieve a 'best' rather than 'exact' fit for protected areas classification. The IUCN Guidelines have an inherent flexibility designed to aid their application in different regions and countries. This Handbook is therefore primarily designed to provide information to assist the application of the IUCN Guidelines in the Australian context.

In interpreting the IUCN Guidelines, the following points should be noted:

- \* they are *guidelines* - they do not provide precise answers for assessment of an area;
- \* the Definition, Objectives, Guidance for Selection and Organisational Responsibility for each category should be considered in assessing an area;
- \* the examples provided in the IUCN Guidelines for each category give a valuable guide as to how the categories can be applied in a range of circumstances;
- \* the categories I - VI are not ordered according to any priority, rather they cover a spectrum of land\seascapes and management objectives.
- \* the Objectives of Management and Guidance for Selection are not presented in priority order in the IUCN Guidelines;
- \* as the management of particular areas may alter over time it is appropriate that they are regularly re-assessed for inclusion as protected areas, as well as for their protected area category;
- \* this re-assessment allows areas which may not currently meet the requirements for protected areas to be included as their management objectives evolve to meet the IUCN criteria;
- \* conversely, re-assessment may be required where management objectives are altered which may change a protected area's category or indeed mean it no longer meets the definition of a protected area;
- \* the Guidelines have been developed to apply to the marine and terrestrial environments equally.

In using this handbook, the following points are important:

- \* the IUCN Guidelines are the principal reference;
- \* the handbook is designed to assist assessments in the Australian context, but *not* to replace the IUCN Guidelines;
- \* bold type within the text indicates an extract from the IUCN Guidelines.

### **2.2 Limitation on Application of the IUCN Guidelines**

It is important that the limitations on application of the IUCN Guidelines are kept in mind by users of this Handbook.

The IUCN Guidelines are *not* designed to apply to all land or sea which has high nature conservation value. Rather, they are designed as a tool to assist the classification of only that segment of the landscape/seascape that conforms with the definition of 'protected area' by having a particular legal

regime or other means whereby the protection and maintenance of biological diversity, and of natural and associated cultural resources is the principal objective.

The most recent national estimate (1991) indicated that approximately 6.4% of Australia's terrestrial area and 4.5% of the Australian Fishing Zone was included in formal protected areas (Hooy and Shaughnessy, 1992). Notwithstanding significant increases in proclamations in the past 15 to 20 years, the proportion of land with protected area status in Australia will probably never be extensive.

For a range of economic and social reasons, many areas with nature conservation significance will remain outside the protected area estate and will be managed with a primary objective other than protection and maintenance of biological diversity. The fact that such areas do not fall within the IUCN classification system should not be taken to imply that they have no value for the conservation of biological diversity. Areas such as production forests, road reserves and historic shipwreck protected zones which are designated for purposes other than protection and maintenance of biological diversity clearly may have considerable nature conservation significance and biological diversity can be an important secondary objective of their management.

It is also important to stress that the IUCN Guidelines do not represent a comment on how well a particular protected area is managed. Classification to a particular category must be based on the management objectives for the area and not the effectiveness in meeting those objectives. Reclassification of a particular area from one category to another because the original management objectives have not been satisfied (for example through failure to control human encroachment on the area) is inconsistent with the intent behind the IUCN Guidelines. It may well be the case that areas falling outside the strict definition of 'protected area' and therefore not subject to classification under the IUCN Guidelines will be better managed than areas which can be classified under the IUCN system. This is a matter of *effectiveness* of management rather than *intent* of management which is beyond the scope of both the IUCN Guidelines and the present handbook.

## **2.3 The Concept of 'Natural'**

The IUCN Guidelines refer frequently to natural areas or areas with natural features. The term 'natural' is defined in the Guidelines (consistent with other international environmental texts) as:

**Ecosystems where since the industrial revolution (1750) human impact (a) has been no greater than that of any other native species, and (b) has not affected the ecosystem's structure. Climate change is excluded from this definition.**

In Australia there is considerable doubt as to the practicality of this definition. While a large part of the Australian landscape/seascape has a high degree of perceived naturalness, in fact, it is in large part a result of direct human intervention, an artefact resulting from many years of manipulation by Indigenous people. Further, Indigenous people view all aspects of the natural environment, the landscape/seascape and wildlife as having a cultural dimension and context. 'Natural' therefore, is not a particularly useful term in the Australian context. However the term is central to the interpretation of the IUCN Guidelines and accordingly in the Australian context it is assumed for the purposes of this handbook that those ecosystems presumed to be present at the time of European settlement (1788) represent 'natural' ecosystems.

The scale of modification of Australian environments since European settlement also needs to be taken into account in applying the definition of natural. Few parts of Australia can now be regarded as substantially free of the influence of European settlement (eg the presence of introduced species) even those regions which are remote from permanent habitation.

A strict interpretation of the definition of 'natural' in these terms could rule out use of a number of the categories. Accordingly, for the purposes of this handbook, 'natural' areas are regarded as those areas which largely retain the landscape and ecosystem character that existed prior to European settlement.

## **2.4 Role of Indigenous People in Contemporary Protected Area Management**

The need for a new perspective on the role of protected areas has recently emerged as a result of national and international events relating to Indigenous and resident peoples' involvement in protected area management.

Internationally, for example, the Fourth World Congress on National Parks and Protected Areas in Caracas, Venezuela in 1992 developed the 'Caracas Action Plan' which emphasised that protected areas should be managed with and through local populations and that the traditional western view of protected areas required a shift to other models based on partnerships with local communities, Non-Government Organisations and private landholders. From a national perspective, the 1992 High Court decision recognising native title can be expected to result in increased participation and involvement of Indigenous people in protected area management, either as a direct result of successful native title claims or as a result of land use agreements which give Aboriginal and Torres Strait Islander communities a formal and significant role in future land use and land management decisions.

A number of implications for protected area classification and management in Australia can be anticipated to arise from this new perspective. These include an increase in the number of existing protected areas which are subject to joint or cooperative management arrangements between conservation agencies and indigenous communities; enhanced utilisation of protected areas by Indigenous people for traditional purposes; closer links between conservation agencies and a greater number of indigenous communities owning land of nature conservation significance; and possibly quite new administrative and management arrangements for biodiversity conservation on indigenous land.

The IUCN Guidelines provide for the involvement of Indigenous people in management of all protected area categories. One of the new perspectives gained from the increasing involvement of Indigenous people in the management of protected areas is their holistic approach to protected area management in contrast to the division between cultural and natural processes and sites in non-indigenous protected area management. To many Indigenous people the major aim of protected area management may be the maintenance of their cultural heritage of which biodiversity conservation may be an integral but not the only part. In such a case it is considered that the requirements of the IUCN definition of a protected area would be met.

Given the definition of 'natural' above, it follows that the full range of traditional indigenous activities are acceptable in all IUCN categories. As part of the description of the various IUCN categories, the handbook refers to traditional activities by Indigenous people and where they would be consistent with the management objectives for those categories. *Users of the handbook should note that, in the context of protected area management, the concept of traditionality is not determined by the use of a particular technology. Rather traditionality is determined by the purpose of the particular activity and its likely management implications.*

### 3. ELIGIBILITY FOR CLASSIFICATION AS A PROTECTED AREA

An area is eligible for classification as a protected area under the IUCN Guidelines if:

- \* it falls within the overall definition of a protected area; *and*
- \* it fulfils the selection criteria for a category defined in the IUCN Guidelines.

Please note that in the following chapter **bold** text represents an extract from the IUCN Guidelines (1994).

#### 3.1 Definition of a 'Protected Area'

The IUCN Guidelines define a protected area as:

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

This definition therefore provides two major tests for determining whether an area is eligible for classification as a protected area. These are:

- \* Is the area particularly or chiefly **dedicated to protection and maintenance of biological diversity, and of natural and associated cultural resources?** *and*
- \* Is the area **managed through legal or other effective means?**

##### 3.1.1 *Is the area particularly or chiefly dedicated to protection and maintenance of biological diversity, and of natural and associated cultural resources?*

The basis of categorisation is by **primary management objective** as contained in the legal definitions (or similar effective means such as customary agreements or the declared objectives of a non-governmental organisation) under which an area was established.

Dedication of an area for protection and maintenance of biological diversity does not *necessarily* require the area be in natural condition although generally this will be the case. The restoration of an area to a natural state can also be a legitimate part of this primary management objective. *Figure 2, Appendix 2* illustrates the relationship between the level of human intervention and the IUCN categories. In general terms Categories I, II, III and VI apply to natural or substantially natural areas while categories IV and V apply to areas which may have been modified.

##### Inclusion guidelines

- (i) An area dedicated with a principal management objective, legally defined in a State, Territory or Federal Act of Parliament, which is oriented to protection and maintenance of biodiversity (eg. national parks, marine parks, nature reserves, forestry flora reserves); or
- (ii) an area which protects cultural resources which are presented in their natural context. Such an area may demonstrate specific interactions with the surrounding landscape/seascape; or
- (iii) land or sea subject to the provisions of multiple legislation, where an overriding power or planning responsibility is vested in one authority *and* where the principal object of this authority is protection and maintenance of biological diversity (eg. Water Board Catchments within National Parks).

##### Exclusion guidelines

- (i) An area that is dedicated with the principal objective not directly related to the protection and maintenance of biodiversity or natural values (eg. Crown Leases , State Forests subject to commercial timber extraction, Water catchment areas); or
- (ii) an area which protects cultural resources which are presented with no relationship to their natural context (eg. some historic sites).

### ***3.1.2 Is the area managed through legal or other effective means?***

In the case of areas declared under an Act of Parliament, the objects of the Act which establishes the managing authority, and specific objectives and management guidelines provided in the Act that relate to the particular land designation should be considered. In the case of privately owned lands or indigenous land which are the subject of covenants or conservation agreements, a clear statement of management intent should be in place. In this process of assessing the primary management objective of an area, the Guidelines state that **site management objectives are of supplementary value**. However in the absence of any clear legislative basis to a protected area, it may be necessary to refer to site management plans to establish whether or not provisions for the protection of the site are adequate.

#### Inclusion guidelines

- (i) An area designated under the provisions of a particular Act, where the tenure or land-use of this area cannot be altered except by a State, Territory or Commonwealth parliamentary process or by order of a Minister of Parliament in consultation with the Minister administering conservation and wildlife issues for that State (eg. National Parks, Marine Parks and Nature Reserves) or
- (ii) an area subject to protective covenant on title or agreement under the provisions of land titles legislation or wildlife conservation legislation. The covenant and land uses allowed should be subject to alteration only by a Minister of Parliament, in consultation with the Minister administering environmental planning, conservation or wildlife issues for that State (eg. Conservation Agreements under the provisions of the *National Parks and Wildlife Act 1974* in NSW). Lands outside the formal conservation system which are subject to these types of covenants, would be considered to meet this test; or
- (iii) an area designated or recognised under the provisions of a particular Act and subject to a legally adopted Plan of Management or equivalent enforceable statement of management intent, which has the principal management objective oriented to the protection and maintenance of biodiversity and of natural and associated cultural resources (eg in Victoria, areas managed for biodiversity according to adopted recommendations of the Land Conservation Council but not yet formally reserved); or
- (iv) an area of indigenous community land or sea that is the subject of a long-term legally enforceable conservation management regime which is endorsed by traditional owners of that land and which has the principal management objectives oriented to the protection and maintenance of biodiversity and of natural and associated cultural resources.

#### Exclusion guidelines

- (i) An area designated under the provisions of a particular Act, where the tenure or use of an area may be altered without parliamentary or Ministerial order processes (eg. Wildlife Refuges in NSW); or
- (ii) an area designated under the provisions of a particular Act, where that designation does not require active management for biodiversity values (eg restrictive zonings in planning instruments); or
- (iii) an area of privately-owned or indigenous land or sea not subject to covenant on title or a long term, legally enforceable conservation management regime.

### **3.2 Key Considerations in Determining the Eligibility of an Area for Protected Area Classification**

In addition to the primary tests as to whether an area fulfils the IUCN definition of a protected area, the following guidelines should be applied to verify this assessment and to aid classification of an area to an IUCN category.

#### **3.2.1 Assignment to a category is not a comment on management effectiveness**

This is a key consideration when applying the IUCN Guidelines. The possible discrepancy between the objectives of management and the effectiveness of management should be recognised. The IUCN Guidelines note that areas should not be reassigned to another category simply because the initial management objectives have not been effectively implemented.

The IUCN Guidelines note that the IUCN is developing a separate system for monitoring and recording management effectiveness, which when complete will stand beside the categories system.

##### Inclusion guidelines

- (i) An area where the principal management objective is directly related to the protection and maintenance of biodiversity, whether or not this objective is considered to be fully achieved.

##### Exclusion guidelines

- (i) An area where the principal management objective is not directly related to the protection and maintenance of biodiversity, or natural and associated cultural resources, irrespective of whether nature conservation is a secondary or incidental outcome (eg. a water catchment that has been protected from interference should not automatically be considered a protected area - where the primary objective is be the supply of potable water, the managing agency may choose to achieve this objective through increased chemical treatment or land uses in the catchment which are not compatible with nature conservation).

#### **3.2.2 The size of a protected area should reflect the extent of land or water needed to accomplish the purposes of management**

The IUCN Guidelines do not have any absolute requirement for size apart from the area being sufficient to accomplish the principal objectives of management. However, the Guidelines do in some instances infer a possible size for areas within certain categories. For example, Categories 1b, II, V and VI imply larger areas while category III would normally apply to specific sites and thus implies smaller areas.

Viability of a protected area is partly a function of the size required to maintain particular features or processes. Two principal objectives apply viz they should be large enough to maintain species and to maintain ecological processes. These objectives may be met with the contribution of adjoining areas which are not formal protected areas. The IUCN Guidelines acknowledge the role of adjoining areas in maintenance of reserve viability and these areas should be considered during assessment.

Where a series of reserves is declared to conserve a suite of remnants their size should be considered in the context of the suite, rather than as individual units.

Due to the interconnectedness of the sea, the minimum viable size of a marine protected area may be many times that of an equivalent terrestrial reserve and the creation of protected areas in marine environments may even be a more integral part of overall resource management for conservation and sustainable use than has usually been overtly recognised on land ( Kelleher and Kenchington 1991:11).

#### Inclusion guidelines

- (i) An area where the size is sufficient to accomplish the principal objectives of management. This may be achieved through additional active management inputs where necessary. Size may vary widely according to the intent of the protected area, for example it may be very small for a seabird roost or rare plant community or quite large for wide ranging fauna. The contribution of adjoining areas may be considered in assessing this criterion.

#### Exclusion guidelines

- (i) An area where the size is insufficient to fulfil the principal objectives of management. The role of adjoining areas may be considered in assessing this criterion as the type and intensity of surrounding land uses will have a major bearing on reserve viability.

### **3.2.3 At least three-quarters and preferably more of the area must be managed for the primary purpose of biological conservation; and the management of the remaining area must not be in conflict with that primary purpose**

The three-quarters rule applies to all categories and is an important consideration in deciding if an area meets the definition of a protected area.

#### Inclusion guidelines

- (i) A 'reserve' with at least 75% of its area managed with a primary purpose of protection and maintenance of biological diversity; *and*
- (ii) a 'reserve' where the 'remaining area' is spatially concentrated within 25% of the total reserve area; *and*
- (iii) a 'reserve' where use of the remaining area **does not conflict** with protection and maintenance of biodiversity on the principal portion.

#### Exclusion guidelines

- (i) A 'reserve' with less than 75% of the area managed for the protection and maintenance of biodiversity; or
- (ii) a 'reserve' where the management of the 'remaining area' is spatially concentrated within greater than 25% of the total reserve area; or
- (iii) a 'reserve' where use of the remaining area is not compatible with the protection and maintenance of biodiversity on the principal portion of the area (ie where the uses either impinge upon or pollute the conservation area). Unacceptable uses include intensive timber harvesting and plantation forestry operations, unsustainable fisheries operations, and extractive industries which alter the essential biological character of the surrounding area (such as extensive surface mining operations).

### **3.2.4 The designated management authority should be capable of achieving the management objectives**

As the IUCN Guidelines indicate, the designated authority may be at any level of government or reside within the private sector or the community. The Guidelines imply that the managing organisation will be generally operating within some type of legislative framework however, non-legal but nevertheless structured management frameworks are clearly also encompassed by the Guidelines.

### Inclusion guidelines

- (i) An area operating under the provisions of an enforceable legal instrument (such as a conservation agreement), legislation, or plan of management, which has a principal objective of protection and maintenance of biological diversity; *and*
- (ii) an area where changes in sea or land use under the legal instrument, legislation, or plan of management, are subject to determination by a Minister or Director for the environment or wildlife or through a parliamentary process which incorporates an accountable public exhibition process (eg in Victoria, areas managed for biodiversity according to adopted recommendations of the Land Conservation Council but not yet formally reserved).

### Exclusion guidelines

- (i) An area where a legal instrument or legislation does not require determination by a Minister or Director for the environment or wildlife or through a parliamentary process.

### **3.2.5 The ownership of the land should be compatible with the achievement of management objectives for the IUCN category**

The IUCN Guidelines recommend that this should be a public body or an appropriately constituted non-governmental body with conservation objectives. In Categories IV, V and VI the Guidelines indicate that private ownership, guided by legislative provisions or an overall managing authority, may be appropriate.

### Inclusion guidelines

- (i) Land of any enduring tenure, such as Crown land, perpetual lease and freehold land, held by a government body, corporatised public utility or public company with the protection and maintenance of biodiversity as their principal management objective; or
- (ii) freehold, Crown and leasehold land subject to protective covenant on title or agreement under the provisions of land titles legislation or wildlife conservation legislation, where the covenant and land uses allowed are subject to alteration only by a Minister (or Director), in consultation with the Minister (or Director) administering environmental planning or conservation and wildlife issues for that State (eg. Conservation Agreements under the provisions of the *National Parks and Wildlife Act 1974* in NSW); or
- (iii) an area of indigenous community land subject to a long-term, legally enforceable conservation management regime and endorsed by traditional owners which has the principal management objective oriented to the protection and maintenance of biodiversity and of natural and associated cultural resources. The agreement should provide for alteration to that objective only by mutual agreement of both parties and in consultation with traditional owners.

### Exclusion guidelines

- (i) An area of transient tenure, such as leasehold lands with a lease duration of less than 99 years; or
- (ii) freehold, Crown or leasehold land, held by an individual, or private company, which is not subject to a protective covenant on title; or
- (iii) freehold, Crown and leasehold land, held by an individual, or private company, which is not subject to a legal instrument or legislation which requires determination by a Minister or Director for planning, the environment, or wildlife or through a parliamentary process; or
- (iv) Indigenous land not subject to an appropriate long-term, legally enforceable conservation management regime.



### **3.2.6 Protected areas of different categories may be contiguous, or contained within another protected area**

The IUCN Guidelines recommend that where an area is subject to separate legal tenure and/or management regime **such areas are identified separately for accounting and reporting purposes**. This also applies to areas used to 'buffer' other areas. Marine protected areas, due to their large size, often encompass a hierarchy of protection, ranging from Category VI to Category Ia areas which are classified by law or within plans of management prepared under protected area legislation as having different management objectives within a single management unit. In this situation such areas would each have a separate IUCN category.

In the case of terrestrial protected areas, where a single designated protected area contains several management zones, an overall category chosen for the protected area, based on the form of management applied to the largest proportion of the protected area (eg a national park may be assessed as a Category II area but may also include Category Ia, Ib and III areas, which although present, have no significant impact on its overall classification).

#### Inclusion guidelines

- (i) Any area, provided it meets the definition criteria of a protected area, may be subject to sub-classification using the IUCN guidelines. For administrative ease, an overall classification, which reflects the 'best fit' for the entire protected area, should be recorded.

#### Exclusion guidelines

- (i) An area where minor portions meet the protected area criteria, but the overall assessment does not meet the definition of a protected area.

### **3.2.7 Planning and management of protected areas must be incorporated within regional planning, and supported by policies adopted for wider areas**

This statement addresses the regional context of protected areas and recognises the importance of regional planning in the successful management of protected areas. For example, areas covered by Regional Environmental Plans in NSW may serve a particularly important role in maintaining the viability of protected areas. In other areas of Australia, the planning and management of protected areas are essentially outside the regional planning process although quite often informal arrangements between the various land management authorities are in place. The Regional Forest Assessment Process leading to a comprehensive, adequate and representative Forest Reserve System in Australia may be a useful model to follow in establishing regional frameworks. As this test of eligibility is rarely met in Australia inclusion and exclusion guidelines have not been included.

### **3.2.8 Provided an area with a supplementary international designation is identified under national arrangements for special protection, it is appropriately recorded under one of the IUCN categories**

International designations such as World Heritage Areas, Biosphere Reserves and Ramsar Wetlands, where applied to protected areas, are *not* management categories in their own right. Such areas should be recorded and classified under the appropriate (if any) IUCN management category. Their special status should be recorded for information only.

#### Inclusion guidelines

- (i) A protected area with supplementary international designations, such as a World Heritage Area, Biosphere Reserve and Ramsar Wetland, which is subject to protection as a Commonwealth, State or Territory protected area; or

- (ii) an area with international designation, which is not subject to protection as a Commonwealth, State or Territory protected area, but which is subject to other effective means of management (eg a covenant on title) and therefore is assessed as a protected area.

Exclusion guidelines

- (i) An area not incorporated in an existing Commonwealth, State or Territory category of protected area and not otherwise meeting the definition of a protected area; or
- (ii) an area which has no enforceable means of management, either by legal or other means.

## 4. THE MANAGEMENT CATEGORIES

This section provides commentary on each category in turn as an aid to classification. For ease of reference, the material on each category is presented in the same format as the category descriptions appearing in the IUCN Guidelines themselves. **Bold** text represents an extract from the IUCN Guidelines.

*Appendix 2* contains a set of tables and figures which illustrate the key objectives and goals of the categories and includes at *Figure 1* a key which will assist users of this handbook in applying the categories. This material is presented in foldout form to enable examination in conjunction with other parts of this handbook.

### 4.1 CATEGORY 1a

#### *Strict Nature Reserve: Protected area managed mainly for science*

##### DEFINITION:

**Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.**

Outstanding ecosystems include those which are notable for their rarity. Physiological features relate to the function of living organisms. Point features or more general features such as landscapes may be represented.

##### OBJECTIVES OF MANAGEMENT:

- \* **to preserve habitats, ecosystems and species in as undisturbed state as possible.**
- \* **to maintain genetic resources in a dynamic and evolutionary state.**
- \* **to maintain established ecological processes.**
- \* **to safeguard structural landscape features or rock exposures.**
- \* **to secure examples of the natural environment for scientific studies, environmental monitoring and education, including baseline areas from which all avoidable access is excluded.**

Activities outlined above are acceptable where the potential impact of such activities is either minimal, as in observational scientific research or temporary, as in some types of manipulative research. Recreation and ecotourism is generally not appropriate. It would only be acceptable in this category where it is included as part of a research or education program prescribed under a formally adopted plan of management.

- \* **to minimise disturbance by careful planning and execution of research and other approved activities.**

To achieve this, a plan of management or some other formal statement of management intent is required. Activities may include scientific studies, environmental monitoring and education, as prescribed under the plan of management. Any activity which induces permanent change in the intrinsic character of the natural system is unacceptable. Maintenance of natural systems through feral animal and weed control and the use of fire are acceptable activities.

- \* **to limit public access.**

Preferably, public access should be either excluded or closely regulated. Where public access exists it should be for recreation and education only, should have no impacts upon the ecosystems, habitats, or species of the area and should be subject to strict controls under a management regime.

#### GUIDANCE FOR SELECTION:

- \* **The area should be large enough to ensure integrity of its ecosystems and to accomplish the management objectives for which it is protected.**

Practitioners should refer to the management objectives as defined in the legislation, plan of management or some other formal statement of management intent, to determine whether an area is large enough to fulfil them. The size required will vary depending whether the reserve aims to protect entire ecosystems or single species. In theory a Category Ia protected area will be of sufficient size to ensure that minimal intervention is required to maintain its ecosystems. In the case of migratory birds or a rare plant species, only a relatively small area such as a rookery, may need to be conserved in order to achieve the desired level of protection. In all cases the context of adjoining land uses should be considered in assessing viability.

- \* **The area should be significantly free of direct human intervention and capable of remaining so.**

In practice, most Australian environments require some degree of human intervention as a consequence of the long history of interaction between people and the landscape. In the Australian context for this category, a degree of human intervention in order to maintain habitats, ecosystems and species is acceptable. Given the spread of feral animals and weeds in Australia it is likely that few areas of Australia exist where active management would not be required in order to maintain biodiversity at some time. Similarly active fire management is also often vital to the maintenance of biodiversity in Australia. Particular fire management regimes may be needed to protect biodiversity from the threat of wildfire from outside the protected area or to replicate or continue a traditional indigenous fire regime.

- \* **The conservation of an area's biodiversity should be achievable through protection and not require substantial active management or habitat manipulation.**

Manipulation constitutes active management in order to favour certain species, habitats, or natural communities over others which may occur in an area. The extent of manipulation adopted, rather than the mere fact of it, should be used to differentiate Category Ia from Category IV areas which are managed for conservation through management intervention.

#### ORGANISATIONAL RESPONSIBILITY:

**Ownership and control should be by the national or other level of government, acting through a professionally qualified agency, or by a private foundation, university or institution which has an established research or conservation function, or by owners working in cooperation with any of the foregoing government or private institutions. Adequate safeguards and controls relating to long-term protection should be secured before designation. International agreements over areas subject to disputed national sovereignty can provide exceptions (eg Antarctica).**

Where the area meets the guidelines for recognition as a protected area as discussed in this Handbook, adequate organisational responsibilities are deemed to be met.

## 4.2 CATEGORY Ib

### *Wilderness Area: Protected area managed mainly for wilderness protection*

#### DEFINITION:

**Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.**

Slightly modified refers to the level of human intervention and the effect this has on the natural systems of the area. Within Australia, many systems may be slightly modified (for example by historic grazing regimes or the presence of introduced species) but may still maintain their wilderness character.

The reference to ‘**without permanent or significant habitation**’ implies that indigenous communities, living a traditional lifestyle may be acceptable in Category Ib. Significant features of European habitation such as public access roads and farming are not acceptable in Category Ib.

#### OBJECTIVES OF MANAGEMENT:

- \* **to ensure that future generations have the opportunity to experience understanding and enjoyment of areas that have been largely undisturbed by human action over a long period of time;**
- \* **to maintain the essential natural attributes and qualities of the environment over the long term;**
- \* **to provide for public access at levels and of a type which will serve best the physical and spiritual well-being of visitors and maintain the wilderness qualities of the area for present and future generations;**

The remote nature of many wilderness areas acts to limit public access, however access must also be restricted to maintain wilderness qualities. A legally enforceable mechanism for the restriction of the level and type of public access should be available in Category Ib areas.

- \* **to enable indigenous human communities living at low density and in balance with the available resources to maintain their lifestyle.**

The use of technologies that impact on the wilderness value of an area, due to noise or physical impacts (such as four-wheel drive vehicles or installation of caravan type camps) are generally not acceptable. Permanent habitation or activities which consume the resources of an area (such as settlements and villages, commercial fishing, grazing and agriculture, exploration, mining and recreational hunting) are not appropriate uses in Category Ib. However, indigenous communities, living a traditional lifestyle are acceptable in Category Ib, where activities are directed under a plan of management or have no significant impact on the resources of an area.

#### GUIDANCE FOR SELECTION:

- \* **The area should possess high natural quality, be governed primarily by the forces of nature, with human disturbance substantially absent, and be likely to continue to display those attributes if managed as proposed.**

High natural quality implies that an area has been relatively unaffected by modern human impacts. A plan of management or equivalent formal statement of management intent is required to ensure this natural quality is maintained.

- \* **The areas should contain significant ecological, geological, physiogeographic, or other features of scientific, educational, scenic or historic value.**

Where significant attributes are combined with a relatively large spatial extent, wilderness areas may have similar attributes to Category II areas. The principal differences between the two categories are firstly the relative intensity and type of recreational use, and secondly the requirement for a wilderness area to be managed specifically for wilderness protection.

- \* **The area should offer outstanding opportunities for solitude, enjoyed once the area has been reached by simple, quiet, non-polluting and non-intrusive means of travel (ie non-motorised).**

These means of travel should be controlled under the provisions of a plan of management or similar statement of management intent. Any means of travel should have minimal impact upon the natural values, and on other users of the area. The use of trails, vehicles or animals for search and rescue, and the control of emergency situations such as wildfire, where prescribed by the plan of management, is acceptable. The strict control of the means of access is often what distinguishes Category Ib from Category II.

- \* **The area should be of sufficient size to make practical such preservation and use.**

In most cases, areas which otherwise fulfil the criteria for Category II would fulfil this criterion.

#### ORGANISATIONAL RESPONSIBILITY:

##### **As for Sub-Category Ia**

Areas to be included in Category Ib should constitute a legal entity (ie gazetted *or* recognised under the provisions of a relevant act) and should be subject to a plan of management or similar statement of management intent under the provisions of either a National or State wilderness or conservation Act (eg NSW *Wilderness Act 1987*, NSW *National Parks and Wildlife Act 1974*).

### 4.3 CATEGORY II

#### *National Park: Protected area managed mainly for ecosystem protection and recreation*

##### DEFINITION:

**Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.**

The concept of ecological integrity implies firstly, that the natural features of an ecosystem are intact, and secondly, that the processes required to maintain that ecosystem are maintained. If these criteria are met then a system is considered to be viable; if they are met through time then a system can be considered to be sustainable.

To exclude exploitation or occupations contrary or adverse to the purposes of the area, the purposes of the area should be defined in a plan of management or some equivalent document. Any activity which is deleterious or contrary to the management intent of the area should be excluded. In practise, minor areas of exploitation or occupation may have been present before reservation of an area. Rehabilitation of such areas should be addressed in the plan of management.

Activities within a Category II area should be culturally compatible, that is, in keeping with the innate cultural attributes of an area. These cultural attributes may derive from a variety of inhabitants over time. For example indigenous and European sites may often occur contiguously. In addition, traditional indigenous use of Category II areas are appropriate where they are in accord with the plan of management or other equivalent statement of management intent.

##### OBJECTIVES OF MANAGEMENT:

- \* **to protect natural and scenic areas of national and international significance for spiritual, scientific, educational, recreational or tourist purposes.**

Category II areas may include a strong recreational and tourism emphasis however, such activity should be based on the appreciation of the area's natural systems. This emphasis may serve as a delimiting feature between Category Ib and Category II sites which otherwise present similar physical characteristics.

- \* **to perpetuate, in as natural a state as possible, representative examples of physiographic regions, biotic communities, genetic resources, and species, to provide ecological stability and diversity.**

The size of a Category II area may vary widely as it relates to the area required to maintain its ecological integrity which is largely determined with respect to surrounding tenure and land use. Generally, however, Category II areas will be relatively large in order to conserve representative samples of physiographic regions. Although the nominal figure of 1,000 hectares is used as a cut-off point for international listings of protected areas, this figure is largely chosen for convenience and has limited relevance to application of the IUCN Guidelines within Australia .

In order to protect biotic communities and ecological processes, activities such as fire control, feral animal control and weed control may be undertaken where the objective is to restore or maintain the essential biotic character of the area.

- \* **to manage visitor use for inspirational, educational, cultural and recreational purposes at a level which will maintain the area in a natural or near natural state.**
- \* **to eliminate and thereafter prevent exploitation or occupation inimical to the purposes of designation.**

The purposes of the area should be defined in a plan of management or some equivalent document. Any activity which is deleterious or contrary to the management intent of the area should be excluded. In practice, minor areas of exploitation or occupation may have been present before reservation of an area. These may either be within the protected area or adjoining it. The impacts of these activities should not have a deleterious effect on the area, for example through pollution. Examples of deleterious activities include mining, logging, grazing and inappropriate recreation activities such as unrestricted four wheel drive use and some tourist development infrastructure. Policies should be in place to phase-out these activities.

- \* **to maintain respect for ecological, geomorphologic, sacred or aesthetic attributes which warranted designation.**

The attributes of an area must be conserved; although the management emphasis of an area may alter over time, the natural and cultural features of the site should be maintained.

- \* **to take into account the needs of Indigenous people, including subsistence resource use, in so far as these will not adversely affect the other objectives of management.**

Where agreed under a plan of management or similar statement of management intent, indigenous communities may choose to access resources for traditional use. This use must have no significant long-term detrimental impact on the resources of an area. The use of non-indigenous technologies (such as rifles and four-wheel drive vehicles) may be allowed under the plan of management, however, activities which consume the resources of an area (such as commercial fishing, forestry, grazing, agriculture and recreational hunting) are not appropriate uses in Category II.

#### GUIDANCE FOR SELECTION:

- \* **The area should contain a representative sample of major natural regions, features or scenery, where plant and animal species, habitats and geomorphological sites are of special spiritual, scientific, educational, recreational and tourist significance.**

The size of an area required for inclusion in Category II is discussed below. A Category II area may have a particular significance to society as a whole for biodiversity conservation, cultural, recreational, aesthetic or scientific reasons.

- \* **The area should be large enough to contain one or more entire ecosystems not materially altered by current human occupation or exploitation.**

Provided this criterion is met, altered ecosystems may be included in a Category II area and comprise a minor part of the area provided that their existence does not conflict with the principal management objectives of the remainder of the area. Examples of altered ecosystems which may be acceptable, although not necessarily desirable, for inclusion in a Category II area, include fire management areas in high-risk areas such as along urban boundaries, vegetation rehabilitation areas, and weed contaminated areas which are subject to control measures.

How the concept of an entire ecosystem is interpreted will depend upon the management intent for the area. The Macquarie Dictionary defines an ecosystem as 'a community of organisms, ..... and the environment in which they live'. When this definition is considered in conjunction with the first guidance for selection (an area '**should contain a representative sample of natural regions, features or scenery**') it is clear that a Category II area is intended to be extensive rather than focussed on discrete



natural features. This may serve as a distinction between Category II and Category III, which does focus on discrete features.

#### ORGANISATIONAL RESPONSIBILITY:

**Ownership and management should normally be vested in the highest competent authority of the nation having jurisdiction over it. However, they may also be vested in another level of government, council of Indigenous people, foundation or other legally established body which has dedicated the area to long-term conservation.**

Ownership and management should normally be vested in the Commonwealth or a State government or an indigenous Land Council which has dedicated the area to long term conservation (ie 99 years or more) through an appropriate leasing arrangement.

## 4.4 CATEGORY III

*Natural Monument: Protected area managed mainly for conservation of specific natural features*

### DEFINITION:

**Area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.**

An area of land and/or sea containing a natural feature is a prerequisite for this category. Cultural features associated with natural features or demonstrating a particular interaction with a natural feature may also be included. The term 'monument' reflects international usage and is less relevant to Australia where that term is more often applied to man-made features in urban landscapes.

The spatial extent of Category III is reflected in the nomination of a feature as the principal characteristic of an area. This serves as the major distinction between Category III and Category II areas which **'should contain a representative sample of major natural regions, features or scenery'** and are by implication, larger.

This category is notable for its anthropocentric rather than biocentric view and lists **'inherent rarity, representativeness or aesthetic qualities or cultural significance'** as defining characteristics. The attachment of cultural values to a feature may contribute to its placement in Category III rather than Category I.

### OBJECTIVES:

- \* **to protect or preserve in perpetuity specific outstanding natural features because of their natural significance, unique or representational quality, and/or spiritual connotations.**

Enduring security of tenure combined with long term application of a plan of management or equivalent statement of management intent is required. Long term protection should be provided for all features whether they are cultural, geological or biological.

- \* **to an extent consistent with the forgoing objective, to provide opportunities for research, education, interpretation and public appreciation.**
- \* **to eliminate and thereafter prevent exploitation or occupation inimical to the purpose of designation.**

Recreation activities which have no deleterious effects upon the area or its management objectives are considered compatible with Category III. For example minimum impact caving activities may be appropriate in a karst area but collection of geological specimens would not be appropriate. The emphasis on the provision of opportunities for public interpretation and appreciation that are consistent with the management aims clearly differentiates Category III from Category Ia.

- \* **to deliver to any resident population such benefits as are consistent with the other objectives of management.**

Provided an activity does not damage the features or processes within the protected area and it is in keeping with the aesthetic and cultural perception of the area, then it may be interpreted as being 'consistent'. A resident population in this case could include people who live away from the site but traditionally use it for purposes such as ceremonies.

#### GUIDANCE FOR SELECTION:

**\* The area should contain one or more natural features of outstanding significance (appropriate natural features include spectacular waterfalls, caves, craters, fossil beds, sand dunes and marine features, along with unique or representative fauna and flora; associated cultural features might include cave dwellings, cliff-top forts, archaeological sites, or natural sites which have heritage significance to Indigenous peoples).**

The significance of a site may be scientific and/or cultural. In situations where the overall cultural significance of a site takes precedence in terms of management actions over the overall natural significance of a site, the IUCN classification should not be applied as the area does not meet the criteria for a protected area. Conservation of cultural values within the natural context of the overall area is appropriate to this category.

**\* The area should be large enough to protect the integrity of the feature and its immediately related surroundings.**

The inclusion, or use, of alternative protection for surrounding areas required to protect the integrity of a feature, for example the water catchment area of karst features, is desirable. Most Category III area are likely to be small.

#### ORGANISATIONAL RESPONSIBILITY:

**Ownership and management should be by the national government or, with appropriate safeguards and controls, by another level of government, council of Indigenous people, non-profit trust, corporation or, exceptionally, by a private body, provided the long-term protection of the inherent character of the area is assured before designation.**

Where the area meets the guidelines for recognition as a protected area as discussed in this Handbook, adequate organisational responsibilities are deemed to be met.

## 4.5 CATEGORY IV

### *Habitat/Species Management Area: Protected area managed mainly for conservation through management intervention*

#### DEFINITION:

**Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.**

The level of active intervention applied, where it is required to favour a specific species or habitat, is a distinguishing feature between Category IV and Category Ia. Normal management activities such as control of wildlife, feral animals and weeds do not constitute active intervention as their intent is not to alter the natural systems of an area.

#### OBJECTIVES OF MANAGEMENT:

- \* **to secure and maintain habitat conditions necessary to protect significant species, groups of species, biotic communities or physical features of the environment where these require specific human manipulation for optimum management.**

The protected area should be of sufficient size and natural or manipulated quality to maintain a species in its habitat or to maintain a portion of the life cycle of a particular species. Manipulation is selective alteration of habitats to favour a certain species.

- \* **to facilitate scientific research and environmental monitoring as primary activities associated with sustainable resource management.**
- \* **to develop limited areas for public education and appreciation of the characteristics of the habitats concerned and of the work of wildlife management.**

Public education and appreciation does not necessarily include active recreation. Any recreation within such areas should have no deleterious effects upon the nature conservation objective.

- \* **to eliminate and thereafter prevent exploitation or occupation inimical to the purposes of designation.**

The purposes of the area should be defined in a plan of management or an equivalent document. Any activity which is deleterious or contrary to the management intent of the area should be excluded. In practice, minor areas of exploitation or occupation may have been developed before reservation of an area. These may be within the protected area or adjoining it. These activities should not have a deleterious effect on the area, for example through pollution. Examples of deleterious activities may include mining, logging, grazing and inappropriate recreation activities. Policies should be in place to phase out these activities.

- \* **to deliver such benefits to people living within the designated area as are consistent with the other objectives of management.**

Subsistence use of the area is acceptable where the scope and extent of such activity does not have a detrimental impact on biodiversity and is clearly defined in a Plan of Management or other similar document. Non-subsistence uses must be consistent with other objectives of management and their primary objective must be to deliver tangible benefits to people living within the designated area. Commercial harvesting of feral animals may be acceptable in this context. Where not provided for in a management plan or equivalent plan, non-subsistence uses for any commercial production or trade are unacceptable.

## GUIDANCE FOR SELECTION:

- \* **The area should play an important role in the protection of nature and the survival of species (incorporating, as appropriate, breeding areas, wetlands, coral reefs, estuaries, grasslands, forests or spawning areas, including marine feeding beds).**

Small remnants, such as roadside nature reserves, should be assessed in context with related remnants to determine, firstly, if they meet the definition of a protected area and secondly, their eligibility for inclusion in Category IV.

- \* **The area should be one where the protection of habitat is essential to the well being of nationally or locally important flora, or to resident or migratory fauna.**

Many protected areas in Australia protect locally significant remnants or species and their contribution should be recognised. The fact that an area is believed not to protect an endangered or rare species does not lessen its contribution to the protected area system as a whole.

- \* **Conservation of these habitats and species should depend upon active intervention by the management authority, if necessary through habitat manipulation (cf Category Ia).**

Active intervention is any activity which alters the presumed natural ecological state, particularly where it favours a particular species or habitat. Habitat manipulation involves alteration to the structure or existing function of a natural or degraded habitat in order to achieve a particular management objective. For example, an estuary may be dredged and re-built to create seabird rookeries or a sandstone environment may be burnt on a pre-determined schedule in order to maintain heathland of a particular successional stage.

Highly modified areas which are being actively restored to their presumed former condition (eg through restorative vegetation programs) or are being managed in a manner which approximates ecological processes which historically operated (eg simulation of natural water regimes) also fit into this category. Such areas must still meet the definition of a protected area.

The level of active intervention adopted distinguishes between Category IV and Category Ia. Normal management activities such as control of wildfire, feral animals and weeds do not constitute active intervention as their intent is not to alter the natural systems of an area.

- \* **The size of the area should depend upon the habitat requirements of the species to be protected and may range from relatively small to very extensive.**

This category can be used to classify individual remnants which would otherwise be too small for long term viability. An example is the suite of six Big Scrub Nature Reserves of northern NSW which individually conserve very small remnants of lowland rainforest but are a more effective reserve network when considered collectively.

## ORGANISATIONAL RESPONSIBILITY:

**Ownership and management should be by the national government, or with appropriate safeguards and controls, by another level of government, non-profit trust, corporation, private group or individual.**

Where the area meets the guidelines for recognition as a protected area as discussed in this Handbook, adequate organisational responsibilities are deemed to be met.

## 4.6 CATEGORY V

### *Protected Landscape/Seascape: Protected area managed mainly for landscape/seascape conservation and recreation*

#### DEFINITION:

**An area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural values, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.**

Category V relates to modified landscapes which demonstrate a particular historic, and on occasions, currently continuing, interaction between people and nature over time. It should be noted that this interaction is not required to be solely by Indigenous peoples but may include areas which demonstrate later settlement and European technologies. Category V is *not* a catch-all category for cultural and historic sites - in many cases these types of sites do not meet the criteria for recognition as a protected area as defined in the IUCN Guidelines.

While Category V areas in a European context may relate to quite highly modified environments, (including structures, villages etc), such modification may not be as obvious in the Australian context, given the types of indigenous modification over the whole continent eg by fire regimes. An example of a Category V landscape may be a protected area where the traditional relationship between the Indigenous people and the land is still ongoing. In these circumstances, while physical evidence of this relationship may be present in the form of cultural materials and sites, it is the intangible elements of this ongoing relationship in the form of spiritual and religious connection to the land which may be of much greater importance, and the cultural values may have no physical manifestation.

Another example could be historic mining or agricultural landscapes which are being maintained through the application of traditional techniques *and* which meet the criteria for a protected area.

The maintenance of a traditional human interaction, rather than a contemporary human interaction may form a distinction between Category V protected areas and Category IV and VI protected areas. Justification for inclusion in Category V includes specific objectives which seek to maintain a traditional human interaction with the landscape. Category V is *not* intended as a catch-all for disturbed natural areas.

#### OBJECTIVES:

**\* to maintain the harmonious interaction of nature and culture through the protection of landscape and/or seascape and the continuation of traditional land uses, building practices and social and cultural manifestations.**

The principal consideration for classification of a site as Category V is that the area does, in fact, meet the criteria for a protected area. Although Category V focuses on modified landscapes the principal objective of management must be **'protection and maintenance of biological diversity, and of natural and associated cultural resources'**.

**\* to support lifestyles and economic activities which are in harmony with nature and the preservation of the social and cultural fabric of the communities concerned.**

While the strongly Eurocentric nature of Category V allows for economic activities, this category is not intended to allow profit-taking from non-traditional land uses. The nature of the lifestyles and economic activities appropriate to the maintenance of the protected area should be defined in a plan of management or similar statement of management intent.

- \* **to maintain the diversity of landscape and habitat, and of associated species and ecosystems.**
- \* **to eliminate where necessary, and thereafter prevent, land uses and activities which are inappropriate in scale and/or character.**
- \* **to provide opportunities for public enjoyment through recreation and tourism appropriate in type and scale to the essential qualities of the area.**

The implementation of these objectives in the Australian context may depend on the particular cultural circumstance of the inhabitants or the landscape involved.

- \* **to encourage scientific and educational activities which will contribute to the long-term well being of resident populations and to the development of public support for the environmental protection of such areas.**
- \* **to bring benefits to, and to contribute to the welfare of, the local community through the provision of natural products (such as forests and fisheries products) and services (such as clean water or income derived from sustainable forms of tourism).**

The last mentioned criterion may be accommodated within the guidelines for recognition as a protected area, if the provision of natural products to the local community is managed and monitored appropriately so as not to adversely impact on or conflict with the protection and maintenance of biodiversity. The scope and management of such activities should be prescribed under a formally adopted plan of management or equivalent.

#### GUIDANCE FOR SELECTION:

- \* **The area should possess a landscape and/or coastal and island seascape of high scenic quality, with diverse associated habitats, flora and fauna along with manifestations of unique or traditional land-use patterns and social organisations as evidenced in human settlements and local customs livelihoods, and beliefs.**

Many landscapes where a traditional human interaction has been maintained in Australia have a relatively high biological productivity or centre on an obvious geomorphological feature and thus they fulfil this guideline. Although Category V has to date had its greatest application in the European context, it may be the case that some indigenous traditional lands and European historic landscapes can be included. For example, protected areas where grazing is a traditional, long and ongoing historical element, intimately linked with the culture and lifestyle of the occupants, and where the maintenance of grazing is vital to conserving a substantial component of the area's biodiversity could fall into this category.

- \* **The area should provide opportunities for public enjoyment through recreation and tourism within its normal lifestyle and economic activities.**

Where the plan of management for a Category V protected area does not allow for public access for cultural reasons, as in some indigenous traditional lands, this guideline does not apply. In the case of a European cultural landscape which is maintained for demonstration and educational purposes, recreation and tourism may be encouraged.

## ORGANISATIONAL RESPONSIBILITY:

**The area may be owned by a public authority, but is more likely to comprise a mosaic of private and public ownerships operating a variety of management regimes. These regimes should be subject to a degree of planning or other control and supported, where appropriate, by public funding and other incentives, to ensure that the quality of the landscape/seascape and the relevant local customs and beliefs are maintained in the long term.**

Where the area meets the guidelines for recognition as a protected area as discussed in this Handbook, adequate organisational responsibilities are deemed to be met. Provided the area is considered to be managed through legal or other effective means it may be included in Category V. Privately owned lands where there is no legally enforceable covenant or plan of management in place do not qualify for classification to this category.



## 4.7 CATEGORY VI

*Managed Resource Protected Area: Protected area managed mainly for the sustainable use of natural ecosystems*

DEFINITION:

**Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.**

The IUCN Guidelines make it clear that four key considerations apply for classification of a site as Category VI as follows:

- **the area must be able to fit within the overall definition of a protected area** (refer to chapter 3);
- **at least two-thirds of the area should be, and is planned to remain, in its natural state** (refer to section 2.3);
- **large commercial plantations are not to be included; and**
- **a management authority must be in place.**

Category VI protected areas should not be seen as multiple-use areas *per se*. The protected area status of the area makes the protection and maintenance of biodiversity the paramount management objective. Hence the first dot point above is the principal one ie. Category VI areas *must* have a primary management objective for the protection and maintenance of biological diversity. Sites for which resource use is the primary management objective and conservation of biodiversity is a secondary objective do *not* meet the criteria for recognition as a protected area.

It should be noted that inclusion in Category VI does *not* mean that resource use within an area is automatic. Rather, it means that resource use may take place with correct safeguards which ensure the long term viability of the conservation values of the protected area. Any exploitation that does occur should be undertaken in an ecologically sustainable manner. The nature of the resource use must be legislatively defined in the proclamation of the protected area or it must be defined in a plan of management or equivalent statement of management intent, which is subject to a parliamentary or public exhibition process. A mechanism to monitor the impacts of any sustainable use should also be defined in the plan of management or equivalent.

The reference to **'long term protection'** does not imply that short-term disruption is automatically acceptable, particularly where that disruption would conflict with the principal nature conservation objective for the protected area.

## OBJECTIVES OF MANAGEMENT:

- \* **to protect and maintain the biological diversity and other natural values of the area in the long term.**
- \* **to promote sound management practices for sustainable production purposes.**

Sustainable production refers to the ecologically sustainable management of an area. A use is not sustainable if it damages the natural values of an area. For example, mining of limestone in karst is not sustainable whereas some water catchment activities will be sustainable.

Permitted resource uses may include sustainable fisheries, selective timber harvesting, controlled grazing, some forms of low impact mining which do not alter or threaten the essential biological character of the surrounding area, tourism and subsistence and commercial activities by the indigenous community. The type, intensity and impact level of resource use appropriate in Category VI protected areas will vary in each area but must be contained within levels which do not threaten the primary purpose of biological conservation. The proportion of a protected area which may be subject to sustainable extractive uses must be determined in the light of the particular characteristics of the site and its management objectives. However such use would generally be restricted to only a proportion of the area. In the case of marine protected areas, fishing activities that would alter communities of bottom dwelling fauna should only be allowed to the extent that they do not compromise the primary purpose of these protected areas

Unacceptable uses include intensive native forest harvesting and plantation forestry operations, unsustainable fisheries operations, and extractive industries which alter or threaten the essential biological character of the surrounding area (such as extensive surface mining operations). While mining beneath a protected area may not actually occur within the area, it may nevertheless impact on the area and should be taken into account in the classification decision.

In the case of water catchments where the principal management objective is water production, the relevant question is whether the management can be interpreted as having an unambiguous remit for conservation and not just simply the apparent naturalness of the area. Where a nature conservation agency is involved in the management of a water catchment (eg through the preparation of a plan of management) and where the principal objective of that plan of management is nature conservation, then a catchment may be defined as a protected area. Where a water catchment occurs within an area managed by a nature conservation agency the legislation which takes precedence should be considered. Some of these areas may be eligible for inclusion as Category Ia, II and IV protected areas.

- \* **to protect the natural resource base from being alienated for other land-use purposes that would be detrimental to the area's biological diversity.**

The use of hypothecation, or the pledging or mortgaging of an interest, in return for access to resources in a protected area, may contribute to the overall welfare of a protected area and may therefore be appropriate component of management arrangements.

- \* **to contribute to regional and national development.**

The definition refers to the provision of a sustainable flow of natural products and services to meet community needs. The appropriateness of resource use should be judged on its impact on biodiversity, not the economic significance of the project.

## GUIDANCE FOR SELECTION:

- \* **The area should be at least in two-thirds natural condition, although it may also contain limited areas of modified ecosystems; large commercial plantations would *not* be appropriate for inclusion.**

Users of this handbook are again reminded that the area in question must meet the definition of a protected area which involves at least three-quarters of the area being managed for the primary purpose of biodiversity conservation. That requirement should not be confused with the 'two-thirds rule' (see above) which applies to the natural condition of the area, not the management objective being pursued. Any activities undertaken in Category VI areas must satisfy both rules. The 'two-thirds rule' has been particularly applied to Category VI protected areas to ensure that two thirds of the area remains in a natural condition and does not become subject to wide ranging deleterious activity. The protection and maintenance of biodiversity must also be the primary consideration in the management of the remaining one third area. The one third must not be seen in any sense as a sacrificial area for resource extraction where biological diversity values can be compromised.

The concept of 'natural' in the Australian context is briefly considered in Chapter 2. *Appendix 2, Figure 2* which illustrates the relationship between the level of human intervention and the IUCN categories indicates that Category VI areas conceptually lie between Categories III and IV in terms of their natural condition.

- \* **The area should be large enough to absorb sustainable resource uses without detriment to its overall long-term natural values.**

Category VI areas will generally be large in size and certainly should be large enough to absorb sustainable resource use without compromising the long-term maintenance of their natural and cultural values.

## ORGANISATIONAL RESPONSIBILITY:

**Management should be undertaken by public bodies with an unambiguous remit for conservation, and carried out in partnership with the local community; or management may be provided through local custom supported and advised by governmental or non-governmental agencies. Ownership may be by the national or other level of government, the community, private individuals, or a combination of these.**

Where the area meets the guidelines for recognition as a protected area as discussed in this Handbook, adequate organisational responsibilities are deemed to be met. Generally, management of Category VI areas should be undertaken by a nature conservation agency *or* values should be protected by other organisations with the assistance of the relevant nature conservation agency. A conservation agreement or covenant may fulfil these requirements, provided it has appropriate legal backing.

## 5. REFERENCES

Hooy, T and Shaughnessy G. (eds), *Terrestrial and Marine Protected Areas in Australia (1991)*, Australian National Parks and Wildlife Service, Canberra, 1992.

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## ***APPENDIX 1. EXAMPLES OF PROTECTED AREAS IN AUSTRALIA***

This appendix lists Australian protected areas which represent typical examples of the IUCN categories. Each entry, provided by the agency that manages each example, includes a brief description of the management objectives of the area and the reasons for classification under the particular category.

## ***1. CATEGORY Ia: Strict Nature Reserve***

### **1.1 Connells Lagoon Conservation Reserve, NT (approx 19°S/136°E)**

#### **DESIGNATION:**

Connells Lagoon Conservation Reserve was declared under Section 12 of the *Territory Parks and Wildlife Conservation Act 1980* (NT) in 1984. It covers 25,000 hectares and is held in perpetuity by the Conservation Land Corporation under a Special Purpose Lease. (The Conservation Land Corporation was established under the *Conservation Commission Act 1980* (NT) as a body corporate to hold and dispose of real property.)

#### **LEGAL BASIS OF MANAGEMENT:**

The management of the area by the Parks and Wildlife Commission of the Northern Territory is guided by the Connells Lagoon Conservation Reserve Plan of Management, approved by the Northern Territory Legislative Assembly in May 1992.

#### **IN SITU MANAGEMENT:**

The plan of management outlines the following objectives for Connells Lagoon Conservation Reserve:

- to conserve a representative sample of the widespread ecosystem featuring the Barkly black soil plains and tussock grassland dominated by four species of Mitchell grass;
- to design and conduct fire management and grazing experiments with a view to arriving at management prescriptions which will effectively integrate efficient pastoral management with wildlife and habitat conservation;
- to give special protection to rare and endangered species of native plants and animals in the Reserve, and also to species which are locally significant;
- to minimise deleterious impacts on the Reserve by introduced plants and animals; and
- to protect the natural environment including native plants and animals, soils, geological resources and water resources.

The park is zoned into two roughly equal areas, one to remain as a benchmark of the undisturbed ecosystem and the other to be used for scientific experiment towards better conservation management.

#### **REGIONAL SETTING:**

Connells Lagoon is located centrally in the Barkly Tablelands - black soil plains country, approximately 600 kilometres north north east of Alice Springs. The landscape of the Reserve is extremely flat, broken only by a shallow watercourse in the north and barely perceptible gravelly rises throughout. The watercourse is fringed with coolibah (*Eucalyptus microtheca*) and shrubs - the rest of the Reserve carries a dense cover of grasses and is almost devoid of trees.

#### **NATURE CONSERVATION VALUES:**

Connells Lagoon is an important representation of the major habitat types of the Barkly Tablelands, which are not evident in any other reserve. The Reserve sets aside a reference area of *Astrebla* (tussock) grasslands and other associated fauna. It contains a rich bird life including the flock bronzewing pigeon (*Phaps histrionica*), pictorella mannikin finch (*Heteromunia pectoralis*) and the Australian bustard (*Ardeotis kori*).

## CULTURAL AND SOCIAL VALUES:

Connells Lagoon has historical and cultural values related to past Aboriginal occupancy and to its association with the pastoral history of the region, having been part of an important stock route. There are additional educational values associated with the variety of bird life.

## REASON FOR CLASSIFICATION AS CATEGORY Ia

Connells Lagoon Conservation Reserve is a category Ia area as it incorporates a representative ecosystem which is available for scientific research purposes. Within the context of the Plan of Management the reserve is managed as a reference area for tussock grasslands, available for scientific research and to act as a benchmark for environmental monitoring.

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## 1.2 Danggali Conservation Park, SA (140° 43'10.5"E/33° 20'12.5"S)

### DESIGNATION

Danggali Conservation Park was established under the provisions of the *National Parks and Wildlife Act (1972)* in 1976. It covers an area of 253 660 hectares of former pastoral land now owned by the Minister for the Environment and Natural Resources. Danggali is also part of the Bookmark Biosphere Reserve.

### LEGAL BASIS FOR MANAGEMENT

Part III of the *National Parks and Wildlife Act 1972* provides for the proclamation by the Governor of Conservation Parks: areas that are protected or preserved for the purpose of conserving any wildlife or the natural or historic features of the land. A resolution of both Houses of Parliament is necessary before any part of a Conservation Park can be abolished.

Management of Danggali is guided by the *Bookmark Biosphere Action Plan* and will be formalised in the *Danggali Conservation Park Management Plan* which is currently being drafted as required by the *National Parks and Wildlife Act*.

### IN SITU MANAGEMENT

In 1975 Federal funding was made available to purchase four adjoining pastoral properties, Canopus, Morganvale, Hypurna, and Postmark. These were combined to form the Danggali Conservation Park to conserve western grey kangaroo habitat.

Management of Danggali is focused on parts of the reserve formerly used for pastoralism; controlling weeds and vermin, maintaining heritage buildings and undertaking fire protection works along vulnerable boundaries and around buildings. Wildlife management consists of regular surveys of kangaroos and mallee fowl. Visitor management and services consist of maintaining limited access and an interpretive trail.

### GEOGRAPHY

Danggali is located north of the River Murray in South Australia along the New South Wales border. It is about 300 kilometres east of Adelaide. Danggali comprises a gently undulating landscape with widespread easterly running dunes and occasional clay pans which forms a vegetation gradient and contains a number of plant species at the limit of their range including black oak and mallee association.

## NATURE CONSERVATION VALUES

72 % of the park is within the Lowan land system which is characterised by low, discontinuous sand dunes with narrow, sandy swales supporting mixed mallee open scrub with summer red mallee (*Eucalyptus socialis*) and white mallee (*E. dumosa*) and ridge fruited mallee (*E. incrassata*) and porcupine grass (*Triodia irritans*) on the taller dunes. The second largest land system within the park is Hypurna (25 %) and is characterised by calcareous plains and scattered low dunes with black oak (*Casuarina cristata*) low open forest and a diverse, often dense shrub understorey including bullock bush (*Alectryons oleifolius*), quandong (*Santalum acuminatum*), narrow leaf hopbush (*Dodonea viscosa ssp angustissima*), bean bush (*Senna filifolia*) and chenopods (blue bushes, saltbushes and copperburrs). The remainder of the park is divided up into 3 other land systems; Pine valley (calcareous plains with pearl bluebush (*Maireana sedifolia*) interspersed with black oak woodlands on low dunes); Jack Hall gently undulating calcareous plains and run-on areas with pearl bluebush and black bush (*M. pyramindata*) low shrub land, interspersed with clay depressions with spotted emu bush (*Eromophila maculata*), nitre bush (*Chenopodium nitrariaceum*) and thorny fan-leaf (*Selenothamnus squamatus*); The Borehole land-system (Low discontinuous sand dunes with summer red mallee and white mallee open scrub and wide swales with sugarwood (*Myopprum platycarpum*), open woodland and scattered groves of red mallee (*E. oleosa*), white mallee and black oak).

The short beaked echidna (*Tachyglossus aculeatus*) has been recorded in the park and is one of few areas where the fat tailed dunnart (*Sminthopsis crassicaudata*) is relatively common. Other significant species in the park include; little pied bat (*Chalinolobus picatus*), greater long eared bat (*Nyctophilus timoriensis*), sandy inland mouse (*Pseudomys hermannsburgensis*), Yvonne's Ningau (Ningau *Yvonneae*) and striped faced dunnart (*S. macruora*). Fifty species of reptiles have been recorded including the Burtons snake lizard (*Lialis burtonis*), mallee dragon (*Ctenophorus fordi*), broad banded sand swimmer (*Sphenomorphus richardsonii*) and yellow faced whip snake (*Demansia psammophis*). The lower north east pastoral zone is of special importance for some bird species particularly the scarlet chested parrot (*Neophema splendida*) and major Mitchell cockatoo (*Cacatua leadbeateri*) both vulnerable species.

## CULTURAL AND SOCIAL VALUES

The Danggali Tribe inhabited a vast area of the plains south west of Broken Hill. Limited evidence of aboriginal occupation has been recorded in the area. Flint and stones have been recorded around old clay pans but no systematic survey has been undertaken to date.

Pastoral occupation in the region dates from the 1850's when Charles Campbell held 931 square km on his North West Bend Station. Land was taken up again on new pastoral leases after the turn of the century. Sixty six dams were constructed on the properties between 1915 and 1960. Construction techniques involved the use of oxen, horses, tractors and bulldozers. The nature of the soil and a high evaporation rate resulted in many of the dams proving inefficient stock water, however many of the dams hold water for a significant portion of the year.

Walking and touring is allowed throughout the park. Visitors are provided with a semi wilderness outback experience with little interference from outside human influences. Visitors are able to experience western grey kangaroos in a natural environment. Also visitors are able to view other wildlife in their natural environment particularly around the dams and watering points.

## REASON FOR CLASSIFICATION AS A CATEGORY 1a

Danggali is a conservation park used for monitoring kangaroo and mallee fowl populations. It is a field study site for the University of South Australia Park and Wildlife Management degree and the CSIRO is currently researching invertebrate fauna. As a large reserve it is able to support low numbers of visitors throughout the reserve but they are concentrated on limited access points, water points and historic sites. Danggali is large enough to sustain ecological processes and forms a significant portion of the Bookmark Biosphere Reserve. The Bookmark Biosphere Action Plan and the Danggali Management Plan provide for the management of this reserve in accordance with the strict nature reserve IUCN Category 1a.



### **1.3 Section 3, Hundred of Messent (Native Vegetation Heritage Agreement), SA (139° 47'24"E/36° 06'25.2"S)**

#### **DESIGNATION**

Section 3, Hundred of Messent (Native Vegetation Heritage Agreement) was established under the provisions of the *Native Vegetation Act (1991)*. It covers an area of 2000 hectares of private land.

#### **LEGAL BASIS FOR MANAGEMENT**

The *Native Vegetation Act (1991)* provides for the registration on the land title of an agreement between the Government (the Minister for Environment and Natural Resources) and the land holder to conserve and manage native vegetation and associated animals. A Heritage Agreement may be varied or removed only by agreement by both the Minister of Environment and Natural Resources and the landowner.

#### **IN SITU MANAGEMENT**

Management of most heritage agreements focuses on protection from threats. Funding is available to undertake fencing, to stock proof the area, and other selected management work. There are Native Vegetation Management officers employed by the Department of Environment and Natural Resources who facilitate management of these areas. Most of the management works are undertaken by the landholder. The landowner receives relief from rates and taxes to help facilitate landowner funded management work.

#### **GEOGRAPHY**

Section 3, Hundred of Messent is located 200 kilometres south east of Adelaide in South Australia near Messent Conservation Park. This is a gently undulating landscape with widespread southeasterly running calcarenite dunes covered with mallee and inter-dune calcarenite plains of wetland and woodland.

#### **NATURE CONSERVATION VALUES**

*Opercularia ovata* is a vulnerable plant species that occurs in *Melaleuca brevifolia* heath in this heritage agreement. There have been 149 plant species recorded in the area. There are extensive wetlands. *Allocasuarina verticillata* woodland and *Gahnia trifida* / *Gahnia filum* sedgeland are significant vegetation communities in the region. Common wombats occur in this area. The following significant birds are recorded here; mallee fowl, painted button quail, spotted nightjar, slender-billed thornbill, rufous bristlebird, southern emu-wren and shy hylacola.

This heritage agreement forms an important refuge adjacent to Messent Conservation Park.

#### **CULTURAL AND SOCIAL VALUES**

Cultural and social values have not been documented as the land is privately owned and not accessible to the public. The region was used extensively by Indigenous people and evidence of occupation is probably present.

#### **REASONS FOR CLASSIFICATION AS A CATEGORY 1a**

Section 3, Hundred of Messent is considered to be a strict nature reserve, IUCN category 1a, as it is large enough to maintain ecological integrity and meet the category objectives of management. As it is privately owned, it is significantly free of direct human intervention and the management outlined above, which concentrates on protection from threats, allows the area's biodiversity to be maintained.

## 1.4 Bear Reference Area, Vic (37°18'S/142°06'E)

### DESIGNATION

Bear Reference Area was established under the provisions of the *Reference Area Act 1978* in 1984. It covers 380 ha of crown land managed by the Department of Conservation and Natural Resources.

### LEGAL BASIS OF MANAGEMENT

The Bear Reference Area is reserved State forest under the *Forests Act 1958*, and proclaimed as a reference area. It is managed in accordance with Directives for the Management of Reference Areas provided for under the *Reference Areas Act 1978*. Reference Areas are tracts of public land containing viable samples of one or more land types that are relatively undisturbed. They are reserved in perpetuity as a reference, especially for comparative purposes when attempting to solve problems arising from the use of land.

### IN SITU MANAGEMENT

The primary management objective of reference areas is to minimise interference with their natural processes. All access to the Bear Reference Area is restricted except for emergency management or approved research purposes. Pest plant and animal control will only take place in the reference area where control measures on adjacent lands aren't sufficient. Similarly, wildfire suppression in the reference area will only take place where there is no alternative. Buffer zones have been placed around the reference area to various activities including timber harvesting, grazing, apiculture, gravel extraction, mining and mineral exploration and recreation activities to minimise the risk impact from those activities.

### REGIONAL SETTING

Bear Reference Area is surrounded by state forest adjacent to the Grampians National Park in south-western Victoria. It is located in the Victorian Midlands interim biogeographic unit.

### NATURE CONSERVATION VALUES

The Bear Reference Area was selected as an example of laterite on Rocklands rhyolite, on slightly dissected tableland. The open forest and woodland communities are typical of what was the predominant vegetation throughout south-western Victoria, now largely cleared. The communities in the reference area represent some of the least disturbed of this type.

### CULTURAL AND SOCIAL VALUES

Timber cutting was carried out in the south western corner of the area and parts of the area were grazed by sheep. Though Aboriginal sites have not been identified in the Area, evidence from surrounding areas suggest they may exist. Aboriginal people continue to have an association with the general area today.

### REASON FOR CLASSIFICATION AS CATEGORY 1a

Bear Reference Area is a strict nature reserve for scientific purposes and as a reference area is afforded the highest protection. The area was identified as a representative land type of the south-western Victoria and to remain viable, access is restricted and natural processes are allowed to continue in an undisturbed state.

## **1.5 Hamelin Pool Marine Nature Reserve, WA (114°4'E/26°11'S)**

### **DESIGNATION:**

Hamelin Pool Marine Nature Reserve (132,000 ha) is set aside under the Conservation and Land Management Act (WA). It is part of the Shark Bay Marine Reserves, which encompass an area of 748,725 ha, within the Shark Bay World Heritage Area.

### **LEGAL BASIS OF MANAGEMENT:**

The reserve is managed by the Department of Conservation and Land Management on behalf of the National Parks and Nature Conservation Authority.

Marine nature reserves are managed primarily to maintain or restore the natural environment, while providing for compatible recreational and commercial activities. The flora and fauna may not be commercially exploited, and forms of recreation that damage natural ecosystems are not permitted.

### **MANAGEMENT OF THE RESERVE:**

The management plan prepared for the Shark Bay Marine Reserves provides for the total protection of the stromatolites and other features of the Hamelin Pool environment, allowing only those recreational uses that are consistent with that aim. Fishing and the extraction of any other organisms are not permitted. Non-extractive commercial operations are regulated under the Conservation and Land Management Act and may be permitted where they do not conflict with other uses or values.

### **REGIONAL SETTING:**

Hamelin Pool Marine Nature Reserve comprises a large, shallow, hypersaline bay, within the Shark Bay Marine Reserves, 150 km south of Carnarvon. The area is near the northern limit of the transition between the temperate and tropical marine faunas.

### **NATURE CONSERVATION VALUES:**

The hypersaline environment in Hamelin Pool favours the growth of cyanobacteria, which trap and bind sediment to produce different types of mats and structures. These include laminated types known as stromatolites, living representatives of structures that existed some 3500 million years ago. Hamelin Pool contains the most abundant and diverse examples of stromatolites found anywhere in the world.

Another feature is ooid shoals: limestone sands caused by the precipitation of calcium carbonate from hypersaline waters. These are common in ancient sequences but rare in modern seas.

### **CULTURAL AND SOCIAL VALUES:**

Aboriginal occupation of Shark Bay has been dated to 30,000 years ago; more recent sites show their reliance on marine resources. The area is of major importance to recreation, including fishing, diving, camping and sightseeing.

The main human use of Hamelin Pool Marine Nature Reserve, however, is viewing stromatolites. A boardwalk has been constructed for that purpose, and facilities exist for nature interpretation. The reserve is of particular interest for the scientific study of life in hypersaline marine environments.

### **REASON FOR CLASSIFICATION AS CATEGORY 1a:**

Hamelin Pool Marine Nature Reserve fits Category 1a since it is managed primarily for conservation.

## 1.6 Capricornia Cays National Park (Scientific), QLD (23°48'S/152°18'E)

### DESIGNATION

Capricornia Cays National Park (Scientific) was dedicated under the provisions of the *Nature Conservation Act 1992* in 1994, however the area has been protected under prior legislation since 1937. The Park consists of 34 hectares of land owned by the State of Queensland.

### LEGAL BASIS OF MANAGEMENT

Capricornia Cays National Park (Scientific) is managed under the provisions of the *Nature Conservation Act 1992*. The management principles in section 16 of the Act require that a national park (scientific) is to be managed to:

- (a) protect the area's exceptional scientific values and, in particular-
  - (i) to ensure that the processes of nature continue unaffected in the area; and
  - ii) to protect the area's biological diversity to the greatest possible extent; and
- (b) allow for the controlled scientific study and monitoring of the area's natural resources.

However, if threatened wildlife is a significant natural resource for the area the management of the area may include-

- (a) manipulation of the wildlife's habitat; and
- (b) the control of the threatening process relating to the wildlife, including threatening processes caused by other wildlife.

### IN SITU MANAGEMENT

Capricornia Cays National Park (Scientific) is managed to:

- protect the marine turtles, in particular the nesting sites of Loggerhead and Green Turtles, from damage by humans or introduced animals; and
- protect the seabirds, in particular Brown Boobies, and their nesting areas from damage by humans or introduced animals; and
- permit opportunities for scientific research consistent with management guidelines.

Entry to the Park is by permit only, and recreational use is not permitted.

Waters surrounding the National Park (Scientific) lie within the Great Barrier Reef Marine Park and State Marine Park. The Park also forms part of the Great Barrier Reef World Heritage Area.

The Queensland Government and Commonwealth Government (through the Great Barrier Reef Marine Park Authority) co-ordinate to manage issues that occur in both jurisdictions.

### NATURE CONSERVATION VALUES

Capricornia Cays National Park (Scientific) contains Fairfax Island (two islands), Hoskyn Island (two islands) and Wreck Island, which are located in the Capricorn and Bunker Groups offshore from Gladstone. The islands are vegetated sand and/or shingle cays.

Vegetation on the islands includes areas of *Pisonia grandis* forest.

The islands are important as:

- nesting sites for the Loggerhead Turtle (*Caretta caretta*) and the Green Turtle (*Chelonia mydas*).
- seabird breeding areas, particularly for Brown Boobies (*Sula leucogaster*), Black-naped Terns (*Sterna sumatrana*) and Silver Gulls (*Larus novae-hollandiae*).

## CULTURAL AND SOCIAL VALUES

The area has been dedicated as a national park (scientific) for its exceptional natural values.

## REASON FOR CLASSIFICATION AS CATEGORY 1a

Capricornia Cays National Park (Scientific) falls into category 1a because it is an area managed primarily to protect its scientific values, with little or no direct human intervention or manipulation. The park protects seabird and turtle nesting areas and, together with the surrounding marine parks, protects representative samples of coral cay and reef ecosystems. It is available for scientific research and environmental monitoring, but does not allow recreational use.

## 2 CATEGORY Ib Wilderness Area

### 2.1 Nattai National Park, NSW (34°10'S/150°25'E)

#### DESIGNATION:

The Nattai National Park, along with Bargo State Recreation Area, Burragorang State Recreation Area, Nattai State Recreation Area and Yerranderrie State Recreation Area, reserves a major part of the catchment of Lake Burragorang, a principle source of Sydney's water supply. Nattai National Park includes a 29,822 hectare declared wilderness under the Wilderness Act 1987.

#### LEGAL BASIS OF MANAGEMENT:

Section 59 of the *NSW National Parks and Wildlife Act 1974* allows for the declaration of lands as a wilderness where they are identified and assessed as wilderness in accordance with the *Wilderness Act 1987* (NSW). The Act states that wilderness is:

**together with its plant and animal communities, in a state that has not been substantially modified by humans and their works or is capable of being restored to such a state; of a sufficient size to make its maintenance in such a state feasible; and is capable of providing opportunities for self-reliant recreation.**

The management of the area is guided by The Nattai Reserve System Draft Plan of Management (NSW National Parks and Wildlife Service, 1994 in preparation).

#### IN SITU MANAGEMENT:

The Draft Plan of Management has a major objective to protect the Nattai Reserves System as a complementary part of the Nature Reserve System of the Sydney Basin, with an emphasis on the ecological relationships between the National Park and adjacent protected areas. Protection of the Lake Burragorang catchment takes precedence over the provision of recreational activities.

29,824 hectares (63%) of Nattai National Park is declared as wilderness under the provisions of the *Wilderness Act 1987* and the *National Parks and Wildlife Act 1974*. The protection and restoration, where necessary, of wilderness, under the provisions of the *Wilderness Act 1987*, is a focus of management. Promotion of public awareness and appropriate use of the National Park, and its wilderness area, is also an objective.

#### REGIONAL SETTING

The combination of deeply incised Hawkesbury sandstone plateaus, overlying Narrabeen shales and Illawarra Coal Measures, and climatic variations, have resulted in a diversity of flora. Ridges tend to support woodlands including red bloodwood (*Eucalyptus gummifera*), blackbutt (*E. pilularis*), ironbark (*E. fibrosa*), scribbly gum (*E. sclerophylla*) and smooth-barked apple (*Angophora costata*). Major river valleys support forests of she-oak (*Casuarina cunninghamiana*), mountain blue gum (*E. deanii*) and river peppermint (*E. elata*). Moist gullies may include warm and temperate rainforests of sassafras (*Doryphora sassafras*) and coachwood (*Ceratopetalum apetalum*) grading to moist forests including turpentine (*Syncarpia glomulifera*) and mountain blue gum. Eleven species of rare plants are recorded in the area. These include Camden white gum (*Eucalyptus benthamii*) and Rudder's box (*E. rudderi*).

#### NATURE CONSERVATION VALUES:

Nine species of endangered fauna have been recorded in the Nattai locality. These are the green and golden bell frog (*Litoria aurea*), powerful owl (*Ninox strenua*), glossy black cockatoo (*Calyptorhynchus lathami*), brush-tailed rock wallaby (*Petrogale penicillata*), tiger quoll (*Dasyuris maculatus*), long-nosed potoroo (*Potorous tridactylus*), yellow bellied glider (*Petaurus australis*), squirrel glider (*Petaurus norfolcensis*) and koala (*Phascolarctos cinereus*).

## CULTURAL AND SOCIAL VALUES:

The Nattai area was the traditional home of the D'harwawal and Gundangarra tribes and provided a corridor for people travelling from as far afield as Victoria to the major ceremonial grounds in the Camden area. The National Park contains numerous axe grinding grooves, engravings, cave art, shelter sites and surface artefact scatter sites.

The Nattai area served a significant role in the exploration of a route over the Blue Mountains and, by 1824, tickets of occupation for grazing were granted in the Burraborang valley. After the Warragamba Dam created Lake Burraborang in 1960 activity in the area declined due to isolation imposed by the dam waters.

## REASON FOR CLASSIFICATION AS CATEGORY 1b:

Nattai National Park has two principal management types. It is managed as a Category II, National Park or equivalent area for the purposes of ecosystem conservation and recreation, where the recreation is not compatible with the water catchment values. The declared Nattai wilderness, within the National Park, is managed as a Category 1b Wilderness Area. The protection of this wilderness area takes precedence over other management and the area comprises 67% of the National Park. As a result the National Park is given the overall classification of the 1b Wilderness Area: wilderness protection.

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## 2.2 Cape Gantheaume Wilderness Protection Area, SA (137° 28'24.8"E/36° 0'34.4"S)

### DESIGNATION

Cape Gantheaume Wilderness Protection Area was established under the provisions of the *Wilderness Protection Act (1992)* in 1993. It was formerly part of Cape Gantheaume Conservation Park which was first proclaimed under the *National Parks and Wildlife Act* in 1971. Cape Gantheaume Wilderness Protection Area covers an area of 20 100 hectares.

### LEGAL BASIS FOR MANAGEMENT

The *Wilderness Protection Act (1992)* provides for the proclamation by the Governor of Wilderness Protection Areas to protect areas of high wilderness value plus conserve any wildlife or the natural or historic features of the land. A resolution of both Houses of Parliament is necessary before any part of a Wilderness Protection Area can be abolished.

The draft *Cape Gantheaume Wilderness Protection Area Management Plan* is presently being prepared. The land is currently managed in accordance with the *Seal Bay and Cape Gantheaume Conservation Parks Management Plan (1977)*.

### IN SITU MANAGEMENT

Cape Gantheaume Wilderness Protection Area is buffered by Cape Gantheaume Conservation Park and Native Vegetation Heritage Agreements, most management activities (fire prevention and weed control) are undertaken in these buffer zones. There are no known occurrences of weeds within the wilderness area of significance. Most management activity focuses on managing and rehabilitating visitor access to the south east corner of the wilderness area. A Fly Neighbourly Agreement has been created to protect wilderness values and prevent disturbance to New Zealand fur seal breeding colonies within the wilderness area.

### GEOGRAPHY

Cape Gantheaume Wilderness Protection Area is located on the central south coast of Kangaroo Island about 150 km south of Adelaide. It is a large undulating limestone plain with overlying dunes, coastal cliffs and sandy beaches. Vegetation ranges from coastal heath to mallee open scrub with a heath understorey.

### NATURE CONSERVATION VALUES

The wilderness area is comprised of two different environmental associations: Limestone dunes - dominated by coastal white mallee, and Unconsolidated dunes - co-dominance by coastal white mallee and Kingscote mallee. There are three very large unconsolidated dune systems with high scenic value. These environmental associations are poorly conserved elsewhere on Kangaroo Island or the mainland.

Kangaroo Island has no foxes or rabbits. Threats to fauna are cats, domestic dogs and house mice. Threats to flora are invading plants but none are recorded as a threat in Cape Gantheaume. Consequently this area represents a virtually pristine environment with a complete and reasonably undisturbed flora and fauna assemblage.

Specific wildlife values are:

- Australian fur seals (rare) - significant western extent of distribution.
- New Zealand fur seals (rare) - one of the largest breeding colonies in South Australia.
- Australian sea lions (rare) - one of three colonies on Kangaroo Island.
- Peregrine falcon (rare), osprey (vulnerable) and white-bellied sea eagle (vulnerable) use the area.
- Short-tailed shearwater breed at Cape Gantheaume and white faced storm petrel breed north west of Cape Gantheaume near Black Point and
- western whipbird (vulnerable) breed in the coastal mallee.

## CULTURAL AND SOCIAL VALUES

Biophysical naturalness and aesthetic naturalness are high. Remoteness from settlement and access are high. Diverse landforms with high scenic values such as the extensive dunefields, broken limestone cliffs, pinnacles, seastacks, coves and beaches make the coast attractive to unsupported bushwalking. Fishing and diving are popular recreation activities in the south east corner of the wilderness area.

There has been no attempt to settle this part of Kangaroo Island. Aboriginal occupation has not occurred since the Kartan people last occupied Kangaroo Island about 5000 years ago.

## REASON FOR CLASSIFICATION AS A 1b

Only the south east corner of this wilderness area has compromised wilderness values. Surrounding protected areas act as a buffer to the Cape Gantheaume Wilderness Protection Area which is protected and managed in accordance with specific wilderness legislation. All of this wilderness protection area is managed as a Wilderness area IUCN Category 1b.

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## 2.3 Big Desert Wilderness Park, Vic (35°35'S/141°08'E)

### DESIGNATION

Big Desert Wilderness Park was established under the *National Parks Act 1975* (Victoria) in 1979, initially covering 113 500 ha. With a subsequent addition in 1992, the park now covers 142 300 ha.

### LEGAL BASIS OF MANAGEMENT

The park is listed in Schedule Two A of the *National Parks Act 1975*. Schedule Two A parks (wilderness parks) are managed in accordance with the specific wilderness provisions of the Act.

The Act requires that wilderness areas be managed to maximise the extent to which the area is undisturbed by the influences of European settlement to ensure the protection, preservation and evaluation of the natural environment, and to provide opportunities for the appropriate study and for the public to enjoy inspiration, solitude and appropriate self-reliant recreation in undisturbed natural settings.

Except in specified circumstances, the Act prohibits roads, structures and installations, most commercial activities and developments, the use of motorised or mechanised transport and non-indigenous animals, and hunting.



## IN SITU MANAGEMENT

The primary objective in managing the area is to preserve and, where possible, enhance its wilderness condition (ie. the extent to which it is undisturbed by the influences of the European settlement) and to allow natural processes to operate with the minimum of interference.

In general terms, the Big Desert Wilderness does not require intensive management but several management actions will enhance its value as one of Victoria's key wilderness areas. The main issues requiring management attention are: the successful closure and rehabilitation of several vehicular tracks; the control of illegal vehicle entry; sensitive fire management; the encouragement of safe and minimal impact use of the area; and co-operation with South Australia over cross-border management. Control of pest plants and animals may also be required at certain sites. Several of these issues will need to be addressed as part of broader regional programs relating to the Mallee parks system as a whole.

## REGIONAL SETTING

The Big Desert Wilderness Park is located in the western Big Desert of North West Victoria abutting the border with South Australia, in the Murray-Darling Depression interim biogeographic unit. The Big Desert is one of three broad bands of dunefields in western and north-western Victoria.

## NATURE CONSERVATION VALUES

The Big Desert Wilderness is characterised by a large expanse of vegetated dunes, mostly with a relief of a few metres but with individual parabolic dunes 20-40 metres high. Occasional soaks and sandstone outcrops provide diversity in an otherwise geomorphologically uniform landscape.

Ten distinct floristic communities are recognised in the Big Desert Wilderness. The two dominant communities are Mallee Heath and Sand-plain Heath. The most significant community is Scrub-pine Woodland which was far more widespread in the Big Desert as a whole before fires in 1959 and the 1980s reduced its distribution. The Park also contains the largest undisturbed areas of Broombush Mallee in the State. Thirteen rare or threatened plant species have been recorded.

Although there has not been a detailed fauna survey of the Park, the Big Desert as a whole, of which the Park is likely to be representative, supports a rich faunal assemblage. This reflects its habitat diversity, relative lack of predators and the location of the area between the mesic environment to the south and the arid environment to the north, and the consequent intermingling of species typical of both. More reptile species have been recorded here than most other parts of the State, and the Desert is also particularly rich in birdlife.

## CULTURAL AND SOCIAL VALUES

Evidence of occupation in the semi-arid parts of the Mallee is restricted to the last 18 000 years because of earlier dune activity. Archaeological evidence suggests a population expansion into the region approximately 4000 BP. Known sites in the Park are almost solely restricted to the soaks of irregular dune fields.

There has been relatively little human activity in the Park as a result of European settlement; greater activities occurred in areas outside the Big Desert that were more suited to agricultural developments. A vermin-proof fence was erected along the South Australian border, on the edge of the Wilderness, late last century in response to attacks on sheep by wild dogs though this is now in disrepair. Aside from the fence, no significant historic sites have been identified to date in the Park.

The Big Desert Wilderness Park is highly valued as one of the largest tracts of highest quality wilderness in south-eastern mainland Australia, and for the opportunity it provides for experiencing solitude, inspiration and self-reliant recreation in an essentially undisturbed natural setting.

## REASON FOR CLASSIFICATION AS CATEGORY 1b

Big Desert Wilderness Park falls into Category 1b. The primary management objective is to protect and enhance the Park's wilderness condition and to provide for appropriate use and enjoyment of the area.

### **3 CATEGORY II: National Park**

#### **3.1 Little Desert National Park, Vic (36°30'S/141°30'E)**

##### **DESIGNATION:**

Little Desert National Park is reserved under the provisions of the *National Parks Act 1975* (Victoria). The park was initially proclaimed in 1968, covering 945 ha. With subsequent additions, the total size of the park was brought to 132,000 ha.

##### **LEGAL BASIS OF MANAGEMENT:**

The park is listed in Schedule 2 of the *National Parks Act*. Schedule 2 parks (national parks) are managed in accordance with objectives specified under Section 4 of the Act. The key objectives are the preservation and protection of the park in its natural condition; for the protection and preservation of indigenous flora and fauna and features of scenic, archaeological, ecological, geological, historic or other scientific interest; for the study of ecology, geology, botany, zoology and other relevant sciences; and for the enjoyment, recreation and education of the public. The Act requires a management plan to be prepared for all Schedule 2 parks.

Land Conservation Council recommendations approved by Government by virtue of the *Land Conservation Act 1970* (Victoria) are required to be adopted in the management of the park (see below).

##### **IN SITU MANAGEMENT:**

Management of Little Desert is guided by the Little Desert National Park and Wail State Forest Proposed Management Plan (Department of Conservation and Environment, 1991). The plan indicates the way in which the above park management objectives will be met. The plan also addresses additional recommendations made by the Land Conservation Council in its Final Recommendations for the Wimmera Area in 1986. The Council recommended that certain recreational activities including horseriding and recreational angling be permitted; that apiculture continue to be permitted; legal access continue to be available to any freehold land enclosed within the park; the existing road network be substantially maintained; and that timber harvesting, grazing and hunting and use of firearms not be permitted.

##### **REGIONAL SETTING:**

The Little Desert National Park is located in the south-west of the Wimmera Region of Victoria in the Murray-Darling Depression interim Biogeographic Region. The Wail State Forest lies on its eastern border, but otherwise the park is surrounded by private land used mainly for mixed cropping and grazing. The Little Desert is characterised by low irregular sand dunes and sand sheets, known as the Lowan Sand, of Quaternary origin. The dunes generally have a low relief of less than 20m but the underlying ridges of older Parilla Sand, laid down in the Tertiary period, give additional height to the dunes in some places.

##### **NATURE CONSERVATION VALUES:**

The vegetation of the park ranges from extensive low heathlands on the sand plains to yellow gum woodlands on sandy clay soils in the interdune depressions. There are also large areas of brown stringy bark woodland, an open scrub on deeper sands, and stands of mallee-broombush scrub where the sandstone ridges are at or close to the surface. In addition, there are small patches of river red gum and black box woodland in interdune depressions and along the Wimmera River, and shrublands of mallee honey-myrtle around several claypans. Of the 688 native species recorded in the park, five are regarded as endangered, 15 as vulnerable, 17 are rare and six threatened.

The clearing of native vegetation from surrounding land has established the park as a refuge for many species of native animals. Because of the diversity of habitat, the Little Desert supports many faunal communities, in particular birds and reptiles. Several species reach their north-western limits in the State in the yellow-gum woodlands.

## CULTURAL AND SOCIAL VALUES:

Aboriginal people occupied the Wimmera area for at least 10,000 years. A number of sites including scarred trees, mounds, and surface scatters survive in the Park. After European settlement the area was used for rough grazing of sheep and bores and wells were sunk to provide stock with water and some other relics of the pastoral era remain. Dispute over use of lands subsequently included in the park led to the formation in 1970 of the Land Conservation Council, which provides advice to the State Government on the use of public land across the State.

The large areas of relatively undisturbed vegetation and the spring wildflower displays provide considerable potential for recreation, especially nature study, walking, camping and four-wheel drive touring.

## REASON FOR CLASSIFICATION AS CATEGORY II:

Little Desert National Park falls into Category II by virtue of its stated management objectives, relatively undisturbed state and large size. Activities permitted in the park are not inimical to the purposes of reservation. Though two reference areas (Category 1a) exist in the park, they cover a total area of 5,440 ha and are not sufficient in size to alter the category of the overall area.

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## 3.2 Flinders Rangers National Park, SA (138° 42'21.5"E/31° 25'12.5"S)

### DESIGNATION

Flinders Rangers National Park was established under the provisions of the *National Parks and Wildlife Act (1972)* in 1945 to protect scenic features and promote tourism. It covers an area of 91 247 hectares of former pastoral land now owned by the Minister for the Environment and Natural Resources.

### LEGAL BASIS FOR MANAGEMENT

Part III of the *National Parks and Wildlife Act (1972)* provides for the proclamation by the Governor of National Parks to protect areas of land with wildlife and natural features of national significance. A resolution of both Houses of Parliament is necessary before any part of a National Park can be abolished.

Management of the Flinders Ranges is guided by *Flinders Ranges National Park Management Plan (1983)* as required by the *National Parks and Wildlife Act*.

### IN SITU MANAGEMENT

Considerable resources are allocated to manage the Flinders Ranges National Park. The objectives of management can be summarised as follows:

- To protect the geological and scenic features of the central Flinders Ranges.
- To conserve semi-arid mountain habitat and wildlife.
- To provide a wide range of recreation opportunities.
- To protect cultural heritage sites.

Specific actions focus on rehabilitation of the environment by control of rabbits, foxes and goats and providing significant visitor services at Wilpena Pound.

### GEOGRAPHY

Flinders Ranges National Park is located in the middle of the Adelaide geosyncline about 500 kilometres north of Adelaide in a semi arid environment. Rugged mountain scenery, peaceful tree lined gorges, abundant wildlife and a seasonal wealth of wild flowers have made the Flinders Ranges very popular. There is a wide variety of habitats which are controlled by geology and altitude. St Marys peak is 1,188 metres high and the out wash plains are about 200 metres above sea level. Chenopod shrublands, Triodia grasslands, native pine open woodlands, tall mallee shrubland, red gum riverine woodland and heath are examples of the variety of habitats.

## NATURE CONSERVATION VALUES

Geological values include; Pre-Cambrian and Cambrian fossils - stromatolites (the world's oldest?) and the Ediacara fossils, Brachina Gorge geological interpretive trail and easy access to a 500 million year geological profile, and clasts of material from Gawler Range volcanics thrown into the Flinders Ranges from a meteorite landing at Lake Acraman over 500 km away.

Wide range of landscape forming processes evident in the ranges, gorges, the natural rock amphitheatre of Wilpena Pound (a doubly inward plunging syncline) is the most prominent topographic feature which also contains the highest mountain in the region (St Mary's peak at 1,188 m). The Flinders Ranges are internationally known for rugged mountain scenery.

There are currently 85 vascular plant species within the reserve of conservation significance at national, state and regional level.

53 species of amphibians and reptiles are also recorded for the park with 8 others likely to occur. Important species include the streamlet froglet (*Crinia riparia*), the SA endemic red bearded dragon (*Ctenophorus vadrappa*), the bull skink (*Ergenia multisculata*), Bougainville's skink (*Lerista bougainvillii*) and the Adelaide snake lizard (*Dellma malleri*) all of which are rare in the Flinders Ranges.

126 species of birds have been recorded with a further 9 species requiring confirmation. Birds of particular interest include striated grass wren (*Amytornis striatis ssp merrotsyi*) and the vulnerable peregrine falcon (*Falco peregrinus*). The rare Baillons crake (*Porzana pusilla*) and the rare painted firetail (*Emblema pictum*) are also present

The yellow footed rock wallaby (*Petrogale xanthopus*) concentrate in 4 major areas, Wilkawillina Gorge, Brachinna Gorge, Bunyeroo Gorge and around the edges of Wilpena Pound. Their decline (listed as vulnerable) has been attributed to predation by foxes, competition from goats and habitat degradation from rabbits. 24 species of mammal species have been recorded for the park including Forests mouse (*Leggadina forrestii*) and the little bearded bat (*Scotorepens greyii*).

## CULTURAL AND SOCIAL VALUES

Aboriginal sites of significance to the Adnyamathanha people: rock art - petroglyphs and painting, mythology, ochre pits, and general occupation sites. The Flinders Ranges National Park is still used by the Adnyamathanha people and some act as rangers to assist with park and visitor management.

The Flinders Ranges are important to Australian art history as the subject of many Hans Heysen landscapes and the site of the, still surviving, Caseneaux tree.

European heritage sites are associated with mining and pastoralism. The Appealinna copper mines which opened in 1896 until 1911 (Oraparinna Diapir and its associated faults). The Wilpena Mine produced silver and lead prior to 1872 and finally closed in 1900. The Oraparinna Asbestos Mine produced 100 tonnes between 1941 and 1942. Asbestos, Barytes and also blue crocidolite asbestos were associated with the Diapir. Pastoralism - ruins, fences, water points, yard and degraded landscapes - (dominated with salvation jane and wild hop).

Recreation values:

- Internationally renowned for painting and photography subjects.
- Vehicle based camping along water courses, gorges and edges of the ranges.
- Bushwalking to Wilpena Pound, along the Heysen trail and marked tracks. Trails range from very difficult walks for experienced walkers to leisurely easy walks.
- The ruggedness and exposure of Moonarie and Point Bonney provide some of the most spectacular and difficult rockclimbs in SA.
- Walking and driving to view points showing outstanding scenic quality generally not visually intruded by the activities or constructions of man.
- Mining, pastoral and rock art heritage sites.
- International tourists come to see Australian fauna - kangaroos and emus.

## REASON FOR CLASSIFICATION AS A CATEGORY II

Flinders Ranges National Park falls into IUCN Category II as it is managed to maintain a wide variety of semi arid ecosystems, to protect rare and endangered plants and animals, protect significant Aboriginal and European heritage sites and provide facilities and services for a large number of visitors to camp, walk and climb in an area of high scenic value of national significance.

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### 3.3 Litchfield National Park, NT (Approx. 13° 10' S/130° 45' E)

#### DESIGNATION

Litchfield National Park was declared under Section 12 of the *Territory Parks and Wildlife Conservation Act* in 1991. The National Park covers 146 square kilometres and is held under leasehold title in perpetuity by the Conservation Land Corporation. (The Conservation Land Corporation was established under the *Conservation Commission Act, 1980* as a body corporate to hold title and deal with land administration on parks and reserves.)

#### LEGAL BASIS OF MANAGEMENT

Management by the Parks and Wildlife Commission of the Northern Territory is guided by the Litchfield National Park Plan of Management, approved by the Northern Territory Legislative Assembly in 1992.

#### IN SITU MANAGEMENT

The Plan of Management specifies dual management objectives, for management of the Park's resources, and for management of recreational use.

Objectives of management of the Park's resources are:

1. To manage and protect the natural environment, including native plants and animals, soils, geological resources and water resources.
2. To give special protection to rare and endangered species of native flora and fauna in the Park, and to species which are locally significant (unusual, unusually abundant or rare).
3. To minimise deleterious impacts on the Park's resources by introduced plants and animals, and by existing and proposed developments.
4. To conserve and promote the cultural, historical and archaeological resources of the Park.
5. To ensure public safety as far as possible from dangerous animals or situations.

Objectives of management of recreational use are:

1. To offer a balanced diversity of tourism and recreational opportunities consistent with the preservation of the Park's natural and cultural values.
2. To provide appropriate visitor facilities and access.
3. To provide more remote adventure oriented experiences in the southern section of the Park to complement and expand the range of attractions available in the more developed northern section of the Park.
4. To develop an information management system which aims to enhance visitor appreciation of the Park and promote appropriate visitor behaviour.
5. To monitor and, where necessary, modify the recreational use of the Park.

Litchfield National Park is divided into five zones for management purposes; an Intensive Use Zone, a Dispersed Use Zone, a Minimum use Zone, a Special Protection Zone and a Service Zone.

The Intensive Use Zone is located around major attractions and access roads in the northern section of the park, providing for intensive day use and overnight camping.

The Dispersed Use Zone is located across the northern section of the park and along four wheel drive access tracks in the southern section of the park. This provides for walk-in, four wheel drive and horse riding access to more natural settings in less crowded surroundings.

The Minimum Use Zone provides walk-in access to bushland settings isolated from the sight and sound of other human use.

The Special Protection Zone provides for the protection of sensitive areas of natural and cultural significance.

The Service Zone provides for the location of administrative and support services necessary for park operations.

Management programs to minimise the impacts of visitor facilities and usage, feral animals, fire and introduced plants are undertaken by day-to-day management staff and are reviewed regularly to ensure management objectives are satisfied.

## GEOGRAPHY

Litchfield National park is dominated by the Tabletop Range, a flat plateau composed of Middle Proterozoic sandstone bounded in most places by a steep escarpment. Numerous spring fed creeks make their way off the escarpment forming short gorges, waterfalls, rockholes and plunge pools. Below the Tabletop Range escarpment, much of the park is composed of undulating country in the east and sandy or black soil plains in the west with numerous billabongs along the watercourses.

## NATURE CONSERVATION VALUES

The Tabletop Range is of particular conservation interest as it acts as an “island” ecosystem due to its geographical isolation from escarpment country elsewhere in the Top End. In this context Litchfield National Park adds considerably to the biogeographic representation within protected areas of the Daly Basin, Pine Creek-Arnhem, and Top End Coastal Bioregions as defined within the Interim Biogeographic Regionalisation of Australia (IBRA).

Litchfield National Park includes excellent representative examples of sandstone plateau and monsoon rainforest plant communities. On the *Eucalyptus miniata* open forest on the plateau several species of restricted distribution are found including the leguminous vine *Uraria sp.*, and the shrubs *Grevillea myosodes* and *Acacia tolmerensis* which is endemic to the Top End. An undescribed trailing vine-like legume (*Dendrolobium sp.*) is well represented within the National Park, as are monsoon rainforest communities.

Litchfield National Park also represents the extremes of the range of a number of plant species. The National Park includes the northern or eastern most limits for *Eucalyptus brachyandra*, *Gomphrena brevistylis*, *Tephrosia virens*, and *Goodenia coronopifolia*. A number of species of sandstone plateau flora have their western most distribution within the National Park, including *Fimbristylis caloptera*, *Plagiocarpus axillaris*, and undescribed *Ischaemum* and *Ipomoea* species.

Litchfield National Park has high fauna conservation values due to its representation of many environments and the occurrence of significant colonies of bat species. Several large colonies, including the largest known colony, of the orange horseshoe bat (*Rhinonicteris aurantius*) occur in caves and abandoned mine shafts within the Park. Smaller colonies of the ghost bat (*Macroderma gigas*) and the unadorned horseshoe bat (*Hipposideros inornatus*), both considered vulnerable, and the endemic diadem horseshoe bat (*Hipposideros diademi inornatus*) also occur in the National Park.

As with plants, the National Park is at the distributional limits of several animal species. The Northern Territory's only microhylid frog, *Sphenophryne adelphe*, is at its southern limit at Litchfield. Two recently discovered mammal species, the Kakadu dunnart (*Sminthopsis bindii*) and Calaby's mouse (*Pseudomys calabyi*) are known no further west than Litchfield.

Other regionally uncommon or threatened species recorded from Litchfield include the Gouldian finch (*Erythrura gouldiae*), hooded parrot (*Psephotus dissimilis*), bush hen (*Gallinula olivacea*), Nabarlek (*Petrogale concinna*), and primitive archerfish (*Toxotes lorentzi*).

## CULTURAL AND SOCIAL VALUES

A number of sites within the Park are important for their Aboriginal cultural values. Several art sites are present, an Aboriginal Sacred Site registered under the *Northern Territory Aboriginal Sacred Sites Act (1989)* is located within the park, and numerous other sites indicative of Aboriginal occupation are found throughout the Park.

Remnants of early white pastoral and mining activity area located at Blyth Homestead (1929) and at the abandoned Bamboo Creek tin mine. The Bamboo Creek mine was focal in early intercultural contact in the Litchfield region, and connections with the mine can be traced by a number of local families.

Use of a number of recreational sites within the Park, particularly the major waterfalls, predates the establishment of the Park. Litchfield is one of the two most visited Park destinations for both locals and interstate and international tourists in the Top End.

## REASONS FOR CLASSIFICATION AS CATEGORY II

Litchfield National Park is categorised as Category II as it protects representative samples of three biogeographic regions. Under the plan of management the National Park is managed to protect the integrity of the enclosed ecosystems, and to provide an appropriate spectrum of opportunities for recreational, scientific, educational and restorative experiences.

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### 3.4 Yalgorup National Park, WA (115°41'E/32°55'S)

#### DESIGNATION:

Yalgorup National Park is set aside under the *Land Act (WA)*. It comprises four separate reserves, with a combined area of 12,888 ha, vested in the National Parks and Nature Conservation Authority.

#### LEGAL BASIS OF MANAGEMENT:

The reserve is managed by the Department of Conservation and Land Management on behalf of the National Parks and Nature Conservation Authority.

National parks are managed for wildlife and landscape conservation, scientific study and to preserve features of archaeological, historic or scientific interest; and also to allow forms of recreation that do not adversely affect the ecosystems or landscapes.

#### MANAGEMENT OF THE PARK:

In addition to the general management aims, above, specific aims set out in the Park's Management Plan include the following: to promote appreciation of the Park's natural and cultural values; to ensure that commercial and other uses are compatible with the park's values; and to promote co-operation and minimise conflicts in the use of nearby lands and waters.



## REGIONAL SETTING:

The Park is located on the south-west coast of Western Australia, between Mandurah and Bunbury. It comprises a chain of long, narrow lakes and several disconnected blocks of dryland vegetation.

## NATURE CONSERVATION VALUES:

The lakes within the Park are recognised internationally for their unique benthic microbial communities, which include living stromatolites and thrombolites. These lakes, together with the Peel-Harvey Estuary near by are important for migratory waterbirds: they comprise the Peel-Yalgorup system of wetlands, one of nine wetland areas in Western Australia recognised as Wetlands of International Importance under the Ramsar Convention.

The Park contains five vegetation complexes that are otherwise not well represented in Western Australia's conservation estate. The flora includes several threatened species, and the fauna includes the rare chuditch (*Dasyurus geoffroii*).

## CULTURAL AND SOCIAL VALUES:

Several sites of Aboriginal occupation have been found, and the area has a rich European history.

The lakes and vegetation provide scenic landscapes. Recreational uses of the Park include birdwatching, bushwalking, picnicking, sightseeing, camping and photography. Waterskiing and canoeing are allowed in restricted areas. and horseriding will be allowed on a designated trail.

## REASON FOR CLASSIFICATION AS CATEGORY II

Yalgorup National Park is a relatively large conservation reserve with scenic character and cultural as well as conservation values. The management plan allows for various human uses of the Park, managed so as to minimise the effect on the natural attributes.

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### **3.5 Lamington National Park, QLD (28<sup>0</sup>14'S/153<sup>0</sup>10'E)**

#### DESIGNATION

The 20,500 hectare Lamington National Park was dedicated under the *Nature Conservation Act 1992* in 1994. The park was originally dedicated in 1915 with the latest addition being made in 1994. The land is owned by the State of Queensland.

#### LEGAL BASIS OF MANAGEMENT

Lamington National Park is managed under the provisions of the *Nature Conservation Act 1992*. Section 17 of the Act defines the management principles for national parks. Accordingly, Lamington National Park is managed:

- (i) to provide, to the greatest extent, for the permanent preservation of the area's natural condition and the protection of the area's cultural resources and values; and
- (ii) to present the area's cultural and natural resources and their values; and
- (iii) to ensure that the only use of the area is nature-based and ecologically sustainable.

The principle mentioned in (i) above is regarded as the cardinal principle of management.

The Park is listed as part of the Central Eastern Rainforest Reserves (Australia) World Heritage Area on the basis of its outstanding geological and biological values.

## IN SITU MANAGEMENT

Lamington National Park is managed to preserve the natural condition of the area, including populations of rare and threatened species, and to protect its World Heritage values. Access to much of the northern part of the park is provided via a system of walking tracks. The southern part of the park will remain undeveloped with provision for appropriate self-reliant recreation.

The park adjoins national park and other conservation reserves in New South Wales. Complementary management of areas on each side of the border is fostered through formal and informal liaison between the management agencies from both states.

## NATURE CONSERVATION VALUES

Lamington National Park lies on a base of rhyolite and basalt derived from the Mount Warning shield volcano, which ceased to erupt about 20 million years ago. Weathering has resulted in the development of a radial drainage pattern and steep escarpments and gorges. The park, together with areas in New South Wales, is of particular geological significance in the context of the Mount Warning shield volcano and its erosion into a huge caldera.

Rich basaltic soils support the largest area of cool subtropical rainforest in south-eastern Queensland and significant areas of Antarctic Beech forest and undisturbed Hoop Pine forest, as well as areas of open forest and montane heath.

The national park contains many endangered, vulnerable or rare plants and animals including species limited to the Border Ranges area of southern Queensland and northern New South Wales. It also contains plants and animals of primitive lineages or which are linked to origins in Gondwana.

## CULTURAL AND SOCIAL VALUES

Several culturally significant sites lie within the park, including the oldest archaeological site in mainland south-eastern Queensland, dated at 9200 years before present. Numerous links with early European settlement of the area are also evident.

Lamington National Park is scenically spectacular, with lush rainforests and numerous waterfalls. It also possesses a great diversity of plant and animal life. This, coupled with an extensive walking track network, results in the park serving as a major regional recreation resource. The southern portion of the park comprises a significant area of relatively undisturbed rainforest and, as such, is of particular value for research and remote self-reliant recreation.

## REASON FOR CLASSIFICATION AS CATEGORY II

Lamington National Park, by virtue of its management for ecosystem protection and recreation, falls into management Category II, national park or equivalent area.

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### **3.6 Undara Volcanic National Park, QLD (18°18'S/144°43'E)**

#### DESIGNATION

Undara Volcanic National Park is dedicated under *the Nature Conservation Act 1992*. The area was first declared as a national park in 1989 with the most recent addition being in 1994. The current area of the park is 61 500 hectares. The land is owned by the State of Queensland.

## LEGAL BASIS OF MANAGEMENT

Undara Volcanic National Park is managed under the provisions of the *Nature Conservation Act 1992*. Section 17 of the *Nature Conservation Act 1992* defines the management principles for national parks. Accordingly, Undara Volcanic National Park is managed:

- (i) to provide, to the greatest extent, for the permanent preservation of the area's natural condition and the protection of the area's cultural resources and values; and
- (ii) to present the area's cultural and natural resources and their values; and
- (iii) to ensure that the only use of the area is nature-based and ecologically sustainable.

The principle mentioned in (i) above is regarded as the cardinal principle of management.

A draft management plan for the park is in preparation, in accordance with Part 7 of the *Nature Conservation Act 1992*.

## IN SITU MANAGEMENT

The primary outcome of management is that the park's significant geological features and landforms are protected. Management strategies also focus on protecting the natural and cultural values while allowing the public access to designated sites and features.

## NATURE CONSERVATION VALUES

The park contains a range of superb and well preserved features associated with Queensland's Cainozoic volcanic history and includes a variety of volcanic vents and long lines of lava tubes. These lava tubes are the finest examples of their development in Australia and are also of international significance. The lava tubes contain cave ecosystems which are also of international importance. Bayliss Cave, with its specialised cave fauna, is one of the world's most important biologically diverse caves. Vine-thickets near the driest extent of their range occur in collapsed areas of lava tube and in craters.

## CULTURAL AND SOCIAL VALUES

Scattered evidence, mainly in the form of stone artefacts and scarred trees with footholds, demonstrates past Aboriginal occupation. Original axe blazes are evident on trees lining the track used for exploration in the 1860s. The park is an important venue for a range of nature-based recreation activities, with interpretive and educational programs related particularly to aspects of Cainozoic volcanism. Useful research opportunities include geological, archaeological, anthropological, biological, palaeontological and fire management aspects.

## REASON FOR CLASSIFICATION AS CATEGORY II

Undara Volcanic National Park falls into Category II, by virtue of its management for the protection of its significant geological features and biodiversity, while allowing for compatible scientific, educational and recreational activities. Even though the park focuses primarily on specific geological features, it is too spatially extensive to fit Category III, Natural Monument.

## **4 CATEGORY III: Natural Monument**

### **4.1 Rainbow Valley Conservation Reserve, NT (24°20'S/133°40'E)**

#### **DESIGNATION:**

Rainbow Valley Conservation Reserve was declared a Conservation Reserve under Section 12 of the *Territory Parks and Wildlife Conservation Act 1980* (NT) in 1990. It covers 2,483 hectares held under Perpetual Crown Lease by the Conservation Land Corporation. (The Conservation Land Corporation was established under the *Conservation Commission Act 1980* (NT) as a body corporate to hold and dispose of real property.)

#### **LEGAL BASIS OF MANAGEMENT:**

Management of the area is guided by the Rainbow Valley Conservation Reserve Draft Plan of Management (Conservation Commission, 1994). The Draft Plan has been subject to public comments and is due to be considered by the Northern Territory Legislative Assembly in late 1995.

#### **IN SITU MANAGEMENT:**

The Draft Plan of Management outlines the Reserve's principal purposes as:

- to conserve the scenic and geomorphic values of the jagged coloured cliffs as spectacular examples of deep sandstone weathering;
- to protect the area's floristic resources, particularly those plant species identified as rare or otherwise significant;
- to provide opportunities for sightseeing, photography, picnicking, camping, walking and other low impact activities consistent with protection of the natural and cultural values of the area; and
- to protect the area's indigenous petroglyphs, rock paintings, other artefacts and sites of cultural significance.
- To assist in achieving these purposes the Reserve is divided into five separate zones, each with a different management strategy. The zones include an intensive use zone, dispersed use zone, special protection zone, natural zone and a service zone.

#### **REGIONAL SETTING:**

Rainbow Valley Conservation Reserve is located approximately 100 kilometres south of Alice Springs, is flanked on the southern boundary by the James Range which rises 550 metres and contains numerous rounded hills and small valleys. The main feature of the Reserve is a series of jagged colour sandstone cliffs from which the area takes its name. Elsewhere in the park are isolated outcrops of Hermannsburg Sandstone in jagged cliff forms. This sandstone is estimated to be approximately 350 million years old. The balance of the Reserve is made up of wind blown red sand dunes and a series of claypans.

#### **NATURE CONSERVATION VALUES:**

The Reserve's conservation values derive from the area's diversity of vegetation and fauna arising from the overlap of several ecosystems, and the presence of rare and unusual plant species. Eight native mammal species, thirty seven reptiles, two frogs and eighty five species of birds have been recorded in the Reserve, but this is not considered to be a complete list. The Reserve contains one of the very few representative samples of Central Australian Sandplain ecosystems and includes two rare and two uncommon plant species.

#### **CULTURAL AND SOCIAL VALUES:**

The cultural values of Rainbow Valley Conservation Reserve arise from the area's associations and significance for the Southern Arrernte Aboriginal People. The area contains one registered Aboriginal sacred site, several sites of cultural significance, three registered Archaeological Places and extensive physical evidence of past occupation including grindstones, stone flakes, art sites and rock engravings.

## REASON FOR CLASSIFICATION AS CATEGORY III:

Rainbow Valley Conservation Reserve falls into Category III as it is managed to conserve the scenic and geomorphic values of the jagged coloured cliffs as spectacular examples of deep sandstone weathering (the prime natural attraction of the area), while allowing for appropriate recreational activities.

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## 4.2 Piccaninnie Ponds Conservation Park, SA (140° 56'17.7"E/38° 03'07.4"S)

### DESIGNATION

Piccaninnie Ponds Conservation Park was established under the provisions of the *National Parks and Wildlife Act (1972)* in 1969. It covers an area of 547 hectares of land now owned by the Minister for the Environment and Natural Resources.

### LEGAL BASIS FOR MANAGEMENT

Part III of the *National Parks and Wildlife Act (1972)* provides for the proclamation by the Governor of Conservation Parks: areas that are protected or preserved for the purpose of conserving any wildlife or the natural or historic features of the land. A resolution of both Houses of Parliament is necessary before any part of a Conservation Park can be abolished.

Management of Piccaninnie Ponds is guided by the Piccaninnie Ponds *Conservation Park Management Plan* as required by the *National Parks and Wildlife Act*.

### IN SITU MANAGEMENT

Management of Piccaninnie Ponds focuses on providing visitor services and facilities for people to view the ponds and wetland ecosystems and provide access to snorkel and dive in the ponds. Monitoring and rehabilitating visitor impact on aquatic and wetland ecosystems, monitoring rare and endangered flora and fauna and protecting the reserve from fire, weeds and vermin.

### GEOGRAPHY

Piccaninnie Ponds are a series of drowned karst features and surrounding wetlands formed in Mount Gambier limestone on the South East coast 450 km southeast of Adelaide.

### NATURE CONSERVATION VALUES

Karst features: Piccaninnie Pond, a drowned doline (13 metres deep) with springs in the base; the Chasm, a drowned fault about 70 metres deep; the Cathedral, a drowned cave complex; the Hammer Head pond, a partially collapsed drowned cave complex and a karst pavement, an area of sheet limestone occurs on the surface (approx 1 ha) in the western portion of the reserve.

Wildlife habitat: over 60 bird species have been recorded in the area, many of which breed in the park. 5 species of native mammals have been recorded, the most notable include swamp antechinus (*Antechinus minimus*) and the water rat (*Hydromys chrysogaster*).

Scheduled plant species: 24 species have been identified in the park which are at risk because of their limited range. The park also conserves the western range extension of *Leptospermum glabrescens*, *Cotula reptans*, *Gentianella diemensi*, *Scavola pallida* and *Pterostylis tenuissima*.

Coastal dune system: the foredune system provides important habitat for the endangered orange bellied parrot (*Neophema chrysogaster*).

Wetlands: three separate wetland systems have been identified: Hammerhead pond (fresh water spring) supporting closed reedland and sedgeland associations; the main pond incorporating a limestone rift and cave complex and associated wetland; the western wetland area containing a number of small springs supporting a closed shrub association dominated by tea tree.

## CULTURAL AND SOCIAL VALUES

Aboriginal heritage (Boandik people): a number of aboriginal middens and tool working sites have been found along the fore dune in the eastern portion of the park.

Piccaninnie Ponds are world renown for cave diving and snorkelling and they are one of the most popular and spectacular dive sites in the South East. They have high water clarity, diverse diving experiences from safe open water diving and snorkelling to extremely dangerous cave diving. Visitor facilities have been developed to provide good access to the main pond for visitors to view the ponds and give divers and snorkellers access with the minimum environmental impact.

Access provided to the ponds has provided good access for other forms of recreation based on the bush and beach like swimming, fishing, camping and nature study.

## REASON FOR CLASSIFICATION AS A CATEGORY III

Piccaninnie Ponds are considered to be IUCN Category III as the site is managed to conserve a single natural feature and provide services and facilities for visitors. Other uses and values are incidental to the significance of the main natural feature.

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### **4.3 Melba Gully State Park, Vic (38°40'S/143°25'E)**

#### DESIGNATION

Melba Gully State Park was established under the provisions of the *National Parks Act (Victoria) 1975*. The Park, covering 65 ha, was proclaimed in 1989.

#### LEGAL BASIS OF MANAGEMENT

The park is listed in Schedule Two B of the *National Parks Act 1975*. The key requirements for management of Schedule Two B parks (State parks) are managed in accordance with objectives specified under Section 17 of the Act. The key objectives are the preservation and protection of the park in its natural condition for the use, enjoyment and education of the public; and for the preservation and protection of indigenous flora and fauna. The Act requires a management plan to be prepared for all Schedule Two B parks. Management of the Park is guided by the Melba Gully State Park Management Plan (Department of Conservation and Natural Resources 1996).

#### IN SITU MANAGEMENT

Specifically, management of the Park focuses on protection of the rainforest and glow worm communities and provision of appropriate levels of visitor use consistent with their protection.

#### REGIONAL SETTING

Melba Gully State Park is located on the western end of the Otway Ranges, approximately 250 kilometres south-west of Melbourne within the South Eastern Highlands interim biogeographic unit. The Park lies a short distance from the renowned Great Ocean Road, between the Otway and Port Campbell National Parks. Situated in one of the highest rainfall areas in Victoria, it reserves some of the last remaining stands of cool-temperate rainforest in the Otway Ranges.

#### NATURE CONSERVATION VALUES

The vegetation of the park is mostly Cool Temperate Rainforest and Wet Forest. The most significant vegetation alliances are the Myrtle Beech/Blackwood and Blackwood alliances. Cool Temperate Rainforest is restricted in Victoria - the Park forms part of a site of regional significance for rainforest conservation in the State.

Although a detailed faunal study of the Park is yet to be undertaken, a number of threatened species have been recorded in the Park, including fish. The Park is also important for those species that are dependent on restricted or highly localised forest resources, such as tree hollows. The most notable fauna is the Glow Worm, found in few other parts of the State.

## CULTURAL AND SOCIAL VALUES

Though intense seasonal activity occurred in coastal areas near the Park, very little is known about Aboriginal associations with the Park itself and as yet no archaeological sites have been recorded. The Park was used for timber harvesting and grazing in some areas. Since its proclamation, the Park has become an important focal point for viewing Cool Temperate Rainforest and Glow Worms.

## REASON FOR CLASSIFICATION AS CATEGORY III

Melba Gully State Park, by virtue of its stated management objectives, falls into Category III, (National Monument) managed for conservation of specific natural features - in this case protection of Cool Temperate Rainforest and Glow Worms. Activities permitted in the park are not inimical to the purposes of reservation. While its management objectives are consistent with Category II areas, the small size of the Park precludes it from being assigned to this category.

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### **4.4 Wolfe Creek Crater National Park, WA (127°48'E/19°10'S)**

#### DESIGNATION:

Wolfe Creek Crater National Park is set aside under the Land Act (WA). It is vested in the National Parks and Nature Conservation Authority and comprises Wolfe Creek Crater.

#### LEGAL BASIS OF MANAGEMENT:

The reserve is managed by the Department of Conservation and Land Management on behalf of the National Parks and Nature Conservation Authority.

As a National Park, it is managed for wildlife and landscape conservation, scientific study and to preserve features of archaeological, historic or scientific interest, and also to allow forms of recreation that do not adversely affect the ecosystems or landscapes.

#### MANAGEMENT OF THE PARK:

The focus of interest in the Park is the crater, the second-largest in the world; the Park has minor developments for recreation and nature interpretation.

#### REGIONAL SETTING:

The National Park lies within the Tanami Desert south of the Kimberley Region of Western Australia, and is located 100 km south of Halls Creek.

#### NATURE CONSERVATION VALUES:

The rim of the crater supports a hummock grassland of *Triodia intermedia*, with scattered shrubs and small trees of *Eucalyptus brevifolia*, *Grevillea pyramidalis*, *G. refracta*, *G. wickamii* and *Hakea ? lorea*. On the crater floor is a low open woodland of *Acacia ampliceps*, with a few bloodwood eucalypts and a herb layer mainly of grasses. The surrounding red sands support a hummock grassland of *Triodia pungens* with emergent shrubs and trees.

Fauna species recorded include the northern mastiff-bat, the little broad-nosed bat and a number of species of bird and reptile. A rare dragon lizard (*Tympanocryptis aurita*) is recorded a short distance west of the reserve.

#### CULTURAL AND SOCIAL VALUES:

The crater, probably caused by a meteorite, is of world significance. Only three other similar craters exist - in Arizona, Canada and Algeria - and only the Arizona crater is larger.

Because of the crater, the Park is a major tourist destination. Despite its remoteness, it is visited by an increasing number of people, and attracts organised bus tours.

#### REASON FOR CLASSIFICATION AS CATEGORY III:

The Park contains a natural feature of outstanding significance for its rarity and landscape value.

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### **4.5 Lark Quarry Conservation Park, QLD (23°11'S/ 142°26'E)**

#### DESIGNATION

Lark Quarry Conservation Park was dedicated under the *Nature Conservation Act 1992* in 1994 and covers an area of 374 hectares. The area was originally protected in 1982. The land is owned by the State of Queensland.

#### LEGAL BASIS OF MANAGEMENT

Lark Quarry Conservation Park is managed under the provisions of the *Nature Conservation Act 1992*. Section 20 defines the management principles for conservation parks. Accordingly, Lark Quarry Conservation Park will be managed to:

- (i) conserve and present the area's cultural and natural resources and their values; and
- (ii) provide for the permanent conservation of the area's natural condition to the greatest possible extent; and
- (iii) ensure that any commercial use of the area's natural resources is ecologically sustainable.

#### IN SITU MANAGEMENT

Lark Quarry Conservation Park is managed to protect rock formations and dinosaur tracks and to allow visitor access while ensuring minimal damage to the rock surfaces.

#### NATURE CONSERVATION VALUES

Lark Quarry Conservation Park contains an internationally significant palaeontological site consisting of fossilised tracks originally made by three dinosaur species present in the area about 100 million years ago. The tracks reveal a dinosaur stampede that resulted when smaller dinosaurs ran to escape a larger predator.

The Park lies in a spectacular landscape of dissected, residual hills and mesas in central western Queensland.

#### REASON FOR CLASSIFICATION AS CATEGORY III

Lark Quarry Conservation Park falls into Category III because it has been dedicated primarily to conserve a specific natural feature of outstanding or unique value because of its inherent rarity - the fossil deposit containing the dinosaur footprints. Management of the park focuses on preserving these values. Visitors



are allowed access to the park for recreational, educational and scientific purposes compatible with preservation of the fossils in situ.

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## **4.6 Glasshouse Mountains National Park, QLD (26°54'S/152°56'E)**

### **DESIGNATION**

Glasshouse Mountains National Park was dedicated under the *Nature Conservation Act 1992* in 1994, and covers an area of 883 hectares. Much of the park has been protected under prior legislation since 1954. The land is owned by the State of Queensland.

### **LEGAL BASIS OF MANAGEMENT**

Glasshouse Mountains National Park is managed under the provisions of the *Nature Conservation Act 1992*. Section 17 of the *Nature Conservation Act 1992* defines the management principles for national parks. Accordingly, Glasshouse Mountains National Park is managed:

- (i) to provide, to the greatest extent, for the permanent preservation of the area's natural condition and the protection of the area's cultural resources and values; and
- (ii) to present the area's cultural and natural resources and their values; and
- (iii) to ensure that the only use of the area is nature-based and ecologically sustainable.

The principle mentioned in (i) above is regarded as the cardinal principle of management.

A draft management plan for the park is in preparation, in accordance with Part 7 of the *Nature Conservation Act 1992*.

### **IN SITU MANAGEMENT**

Glasshouse Mountains National Park is managed to protect the distinctive volcanic peak landscape and the associated complex of native vegetation, while allowing for compatible recreational activities.

### **NATURE CONSERVATION VALUES**

The Glasshouse Mountains are a group of 13 volcanic plugs in the Sunshine Coast hinterland. They are the remnants of tertiary volcanic intrusions which solidified below the surface and have been exposed by subsequent erosion of the overlying material. These dome-shaped hills and sharp conical mountains are of striking appearance, rising abruptly above the surrounding flat coastal plain. The Glasshouse Mountains National Park consists of seven discrete areas, containing eight of the peaks.

The National Park protects 'islands' of natural habitat for flora and fauna in a surrounding landscape largely modified for pine plantations and agriculture. The park contains five endemic vascular plant species and significant populations of several other species of limited distribution.

### **SOCIAL AND CULTURAL VALUES**

Aboriginal association with the area is reflected in the names of many of the peaks and associated stories. Several shell middens and other cultural sites occur within the park.

The mountains were recorded by Captain James Cook as he sailed up the coast in 1770. He referred to their resemblance to 'Glass Houses', although his precise meaning is unclear.

The peaks of the Glasshouse Mountains are a popular recreational venue for bushwalkers, rock-climbers and sightseers.

## REASON FOR CLASSIFICATION AS CATEGORY III

Glasshouse Mountains National Park falls into Category III because it was dedicated primarily to protect a series of volcanic plugs with representative and aesthetic qualities, and of cultural significance. Because the park consists of small areas centred around the peaks, it is suited for designation as Category III rather than Category II.

## 5 CATEGORY IV: *Habitat/Species Management Area*

### 5.1 Macquarie Marshes Nature Reserve, NSW (30°45'S/147°32'E)

#### DESIGNATION:

Macquarie Marshes Nature Reserve was established under the provisions of the *National Parks and Wildlife Act 1974* (NSW) in 1985. It covers 18,013 hectares of land owned by the NSW National Parks and Wildlife Service.

The Macquarie Marshes Nature Reserve is also recognised on other registers including the Register of National Estate, as a National Trust Landscape Conservation Area, and as a Wetland of International Importance under the Ramsar Convention.

#### LEGAL BASIS OF MANAGEMENT:

Macquarie Marshes Nature Reserve is dedicated under the provisions of the *National Parks and Wildlife Act* for:

- the care, propagation, preservation and conservation of wildlife;
- the care, preservation and conservation of natural environments and natural phenomena; and
- the study of wildlife, natural environments and natural phenomena; and
- the promotion of the appreciation and enjoyment of wildlife, natural environments and natural phenomena.

The Nature Reserve's management is guided by the Macquarie Marshes Nature Reserve Plan of Management (NSW National Parks and Wildlife Service, 1993).

The Macquarie Marshes Nature Reserve is managed to maintain a healthy and diverse wetland habitat for all native wildlife through protection of migratory bird habitat and Aboriginal sites, and improved water management to help maintain their ecological systems. High priority is given to assessment of environmental degradation, monitoring of natural processes such as waterbird breeding, and research to establish the most appropriate management policies and programs.

#### NATURE CONSERVATION VALUES:

The Macquarie Marshes Nature Reserve protects part of the internationally important Macquarie Marshes, one of the largest remaining inland semi-permanent wetlands in south-eastern Australia. The Marshes, which include large areas outside the Nature Reserve, contain the largest area of reeds (*Phragmites* sp.) in south-eastern Australia. The Nature Reserve contains significant stands of river red gum (*Eucalyptus camaldulensis*) and coolabah (*E. microtheca*).

About thirty species of waterbirds breed in the Marshes and in favourable years a significant proportion of the total NSW populations of species such as egrets and ibis breed there. The Marshes are important to nine migratory bird species listed in the Japan-Australia and China-Australia Migratory Bird Agreements. Eighteen endangered bird species are present in the Marshes. The Marshes act as a refuge for many native animals and are the western limit of distribution of Gould's long-eared bat (*Nyctophilus gouldii*) in NSW.

#### CULTURAL AND SOCIAL VALUES:

A range of significant Aboriginal sites including oven mounds, surface campsites, scarred trees and artefacts are found within the Nature Reserve.

The Marshes are used for scientific research and teaching by universities and schools. They act as an important social focus for state wide wetland conservation efforts and have functional values in acting as filters and buffers in the Macquarie River.

## REASON FOR CLASSIFICATION AS CATEGORY IV:

The Macquarie Marshes Nature Reserve falls into Category IV due to the environmental water allocation provided so as to ensure the maintenance of habitats and to meet the requirements of specific species. The Nature Reserve is not suited to a Category 1a since major intervention, in the form of environmental water allocations and the installation of offtakes, is required to ensure the survival of the Macquarie Marshes ecosystem. Category IV also provides for scientific research and environmental monitoring and for the development of limited areas for public education and appreciation.

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## 5.2 Jerrabomberra Wetlands Nature Reserve, ACT (35° 19'S/148° 57'E)

### DESIGNATION:

Jerrabomberra Wetlands Nature Reserve is reserved as Public Land (Nature Reserve) under the ACT *Land (Planning and Environment) Act 1991* (the Land Act) as part of Canberra Nature Park. It was originally gazetted under the *Nature Conservation Act 1980* in 1990. The wetlands covers an area of 174 ha.

The wetlands are specified as a Designated Area in the National Capital Plan under the *Australian Capital Territory (Planning and Land Management) Act 1988 (Cth)*.

### LEGAL BASIS OF MANAGEMENT:

The management objectives for the wetlands are included in Schedule 1 of the Land Act under 'Nature Reserve' as: to conserve the natural environment; to provide for public use of the area for recreation, education and research.

The Land Act requires that a plan of management be developed for all reserved public land.

The National Capital Plan specifies the key objective for the wetlands as: to define and maintain Jerrabomberra Wetlands as a protected wildlife refuge, in a National Capital and urban context, with facilities designed to realise the areas potential as a significant conservation and education resource for Canberra residents, tourists and international visitors.

### IN SITU MANAGEMENT:

The wetlands are managed in accordance with the 'Jerrabomberra Wetlands Nature Reserve Management Plan 1994'. The management objectives include conserving native wildlife and enhancing their habitat conditions; contributing to the fulfilment of international agreements protecting migratory bird species; maintaining and protecting the distinctive rural and flood plain landscape and conserving any historic, geological or geomorphological sites; promoting awareness of wetland resources through education, interpretation and recreation opportunities; and, avoiding creating circumstances likely to compromise the safety of aircraft using Canberra Airport.

### REGIONAL SETTING

Jerrabomberra Wetlands lie at the eastern end of Lake Burley Griffin within the city of Canberra, which has a population of approximately 306,000.

### NATURE CONSERVATION VALUES:

The area provides a series of wetland habitats which support a rich and diverse bird fauna, including most of the wetland species occurring in southern Australia. Many terrestrial bird species also occur there as well as numbers of platypus and water rats and other wildlife including invertebrates, amphibians, reptiles and fish.

The wetlands are used by several migratory bird species, including Latham's snipe which is subject to reciprocal migratory bird agreements between Australia and both Japan and China.

Jerrabomberra Wetlands can be used to contribute significantly to the conservation of wetlands generally through education.

## CULTURAL AND SOCIAL VALUES

The area was used intensively by Aboriginal people for tens of thousands of years and was used for grazing purposes by early European settlers. The wetlands has been modified as part of early city landscaping and, generally, exotic plant species of cultural landscape value will be retained.

Ancient river channels and levees, which are still visible on the surface of the floodplain, and are an uncommon feature in the ACT, are a useful educational and interpretative resource.

## REASONS FOR CLASSIFICATION AS CATEGORY VI:

Jerrabomberra Wetlands Nature Reserve falls into Category IV because it is an area created by damming the Molonglo River to create Lake Burley Griffin, which expanded the existing natural wetlands. It is maintained to meet the habitat requirements of wetland species while providing limited areas and facilities for education, recreation and research.

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## 5.3 Bool Lagoon Game Reserve, SA (140° 41'12.4"E/37° 07'21.3"S)

### DESIGNATION

Bool Lagoon Game Reserve was established under the provisions of the *National Parks and Wildlife Act (1972)* in 1967. It covers an area of 3,103 hectares of land now owned by the Minister for the Environment and Natural Resources.

### LEGAL BASIS FOR MANAGEMENT

Part III of the *National Parks and Wildlife Act (1972)* provides for the proclamation by the Governor of Game Reserves: areas preserved for the conservation of wildlife and the management of game which may be hunted at certain times during the year depending on the populations of certain species. A resolution of both Houses of Parliament is necessary before any part of a game reserve can be abolished.

Management of Bool Lagoon is guided by the *Bool Lagoon Game Reserve and Hacks Lagoon Conservation Park Management Plan (1992)* as required by the *National Parks and Wildlife Act*. Bool Lagoon is a RAMSAR wetland of international significance that is managed in accordance with international conventions on wetlands and migratory birds.

### IN SITU MANAGEMENT

Management of Bool Lagoon focuses on manipulating water levels in Bool Lagoon which is part of the South East Drainage Scheme, to maximise water fowl habitat benefits while fulfilling a role as drainage water storage, providing limited hunting opportunities for some species of waterfowl at restricted times and providing education resources and facilities for wetlands and waterfowl. Re-introduction and breeding programs have been undertaken for magpie geese and broilga. Replanting with desirable native plants to improve wetland habitat.

### GEOGRAPHY

Bool Lagoon is a large shallow swamp on the Mosquito Creek in an inter dune corridor in the South East 350 km southeast of Adelaide near the Victorian border.

## NATURE CONSERVATION VALUES

Bool Lagoon is a large and important wetland of international importance. The wetlands large size and diverse habitats are well used by a wide variety and number of water birds. It is an important refuge during drier seasons. It is important habitat for rare and endangered water birds like freckle duck, brolga, magpie geese and Australian and little bittern and a significant breeding site for colonial breeding birds like straw-neck, white and glossy ibis, royal spoonbill, great little and intermediate egrets, little black, little pied and large pied cormorants and individual breeding water birds like magpie geese, blue-bill and musk duck.

## CULTURAL AND SOCIAL VALUES

Traditionally used for duck hunting for over 70 years prior to proclamation and continues to be used on a limited basis (maximum 6 half days per annum). There are good visitor opportunities for photography and observation of a wide variety of water birds through provision of hides and boardwalks to improve observation opportunities. Visitor facilities are used to conduct education programs for school and university students on wetlands and waterfowl management.

Scientific activities include ecological studies of wetland ecosystems, monitoring waterfowl populations, ecology of individual species like musk duck and research into the impact of lead shot on wetlands and wildlife.

## REASON FOR CLASSIFICATION AS A CATEGORY IV

Bool Lagoon is a modified and managed wetland to enhance wetland quality affected by widespread drainage in the region that is supported by significant scientific research. Without this management input and research the wetland would be severely degraded and regional waterfowl populations would be significantly changed in abundance and diversity. Bool Lagoon Game Reserve has been categorised IUCN Category IV for these reasons.

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### **5.4 Mac Clark (*Acacia peuce*) Conservation Reserve, NT (135° 31'E/25° 07'S)**

#### DESIGNATION

Mac Clark (*Acacia peuce*) Conservation Reserve was declared under Section 12 of the *Territory Parks and Wildlife Conservation Act* in 1982. The Reserve covers 3,042 hectares held under Perpetual Crown Lease by the Conservation Land Corporation. (The Conservation Land Corporation was established under the *Conservation Commission Act, 1980* as a body corporate to hold title and deal with land administration on parks and reserves.)

#### LEGAL BASIS OF MANAGEMENT

Management of the Reserve is guided by the Mac Clark (*Acacia peuce*) Conservation Reserve Draft Plan of Management (Conservation Commission, July, 1995). The Draft Plan has been subject to public comment and is due to be considered by the Northern Territory Legislative Assembly in 1996.

#### IN SITU MANAGEMENT

The Draft Plan of Management outlines the following objectives for the Mac Clark (*Acacia peuce*) Conservation Reserve:

- To conserve the population of *Acacia peuce* in the Northern Territory.
- To enable research into the ecology of *Acacia peuce* to determine appropriate management techniques.
- To protect the area's cultural resources, particularly evidence of Aboriginal occupation.
- To enable visitors to appreciate and understand the Reserve's natural, cultural, historical and scientific values.

- To provide low impact recreation and tourism opportunities in a remote, uncrowded and undeveloped desert setting.

To assist in achieving these aims, the Reserve has been divided into two zones. One zone, the Conservation Management Zone, protects the trees and has been fenced with vehicular entry restricted. The other zone, the Natural Zone allows access along the recognised tracks only and allows for provision of orientation and safety signage.

## GEOGRAPHY

Mac Clark (*Acacia peuce*) Conservation Reserve is located approximately 230 kilometres south-east of Alice Springs and is situated in a windswept stony gibber plain adjacent to the western fringe of the Simpson Desert. The Reserve has been excised from the surrounding Andado Station.

## NATURE CONSERVATION VALUES

The conservation values of the Reserve are derived primarily from the occurrence of the waddy wood tree (*Acacia peuce*). *Acacia peuce* is a relict species of this desert environment and is classified as vulnerable to extinction under the Rare or Threatened Australian Plants (ROTAP) system. Representation within the Reserve of other flora and fauna associated with this area of the Simpson Desert add to the conservation values.

Mac Clarke (*Acacia peuce*) Conservation Reserve is the only place in Australia where a population of the *Acacia peuce* is located within a protected area. Only two other populations are known, one near Boulia, and the other near Birdsville, both in Queensland.

## CULTURAL AND SOCIAL VALUES

This area contains artefactual evidence of Aboriginal use and occupation and has significance to the Southern Arrente Aboriginal people. The archaeological sites within the Reserve contain stone tool and flake scatter. The Reserve is included on the Register of the National Estate under Natural Heritage Criteria. There are also values in the area's association with the pastoral industry and the history of geological exploration in the region. The reserve was named after the late Mac Clark, former leaseholder of the neighbouring Andado Station.

## REASONS FOR CLASSIFICATION AS CATEGORY IV

The Mac Clark (*Acacia peuce*) Conservation reserve falls into Category IV Habitat/Species Management Area as it is managed to conserve the only Northern Territory occurrence of the waddy wood tree (*Acacia peuce*).

## 5.5 Ellen Brook and Twin Swamps Nature Reserves, WA (116°01'E/31°43'S)

### DESIGNATION:

Ellen Brook Nature Reserve (73 ha) and Twin Swamps Nature Reserve (155 ha) are set aside under the *Land Act (WA)* and are vested in the National Parks and Nature Conservation Authority.

### LEGAL BASIS OF MANAGEMENT:

The reserves are managed by the Department of Conservation and Land Management on behalf of the National Parks and Nature Conservation Authority.

Nature reserves are managed to maintain or restore the natural environment, and to protect, care for and promote the study of indigenous flora and fauna. The flora and fauna of nature reserves may not be commercially exploited, and forms of recreation that damage natural ecosystems are not permitted.

## MANAGEMENT OF THE RESERVES:

The reserves are managed primarily for conservation, with particular emphasis on enhancing the survival of the critically endangered western swamp tortoise (*Pseudemydura umbrina*). Apart from the general protection of the reserves, management includes water-monitoring, and work to mitigate deleterious effects from the surrounding land. Fox-proof fences have been constructed round Twin Swamps Nature Reserve and the area of best habitat in Ellen Brook Nature Reserve. Tortoises from a captive-breeding program have been re-introduced to Twin Swamps Nature Reserve, where the tortoise population had died out. Ellen Brook Nature Reserve is being extended by the purchase of suitable private land.

## REGIONAL SETTING:

The reserves are located in the north of the Perth Metropolitan Region, on the eastern side of the Swan Coastal Plain, in the suburbs of Upper Swan and Bullsbrook. They contain shallow ephemeral, winter-wet swamps on clay soils or sand over clay. The adjoining land is a mixture of small holdings and rural, and is becoming semi-urban. Clay mining occurs on a site near Ellen Brook Nature Reserve, and further mining of clay is anticipated.

## NATURE CONSERVATION VALUES:

Ellen Brook and Twin Swamps Nature Reserves are the only place in the wild where the western swamp tortoise still survives. No better habitat is available for this animal than in these two reserves.

The reserves are also significant in containing examples of ecological communities that are now rare, as a result of clearing for rural and urban development.

## CULTURAL AND SOCIAL VALUES:

The reserves are used for studies associated with the Western Swamp Tortoise Recovery Plan. Apart from occasional guided tours of the reserves, public access is restricted to the unfenced part of Ellen Brook Nature Reserve.

## REASON FOR CLASSIFICATION AS CATEGORY IV:

The reserves fall into Category IV owing to their importance to the survival of the western swamp tortoise, that being the primary focus of their management.

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## 5.6 Macquarie Island Nature Reserve, Tasmania (54°38'/158°52')

### DESIGNATION

Macquarie Island Nature Reserve was established under the provisions of the Tasmanian *National Parks and Wildlife Act 1970* in 1978. It covers 12,785 hectares of land.

Macquarie Island Nature Reserve is also listed on the Register of the National Estate and as a UNESCO Man and the Biosphere (MAB) Biosphere Reserve.

### LEGAL BASIS FOR MANAGEMENT

The Nature Reserve is in public ownership. Macquarie Island itself and the nearby Bishop and Clerk Islets and Judge and Clerk Islets, to low water mark, have been declared a Nature Reserve under the Tasmanian *National Parks and Wildlife Act 1970* to:

- conserve biodiversity including ecosystems, species and genetic diversity;



- conserve earth heritage, including geological, geomorphological, pedological, hydrological and scenic values;
- protect the area's natural resources and values so as to ensure that the natural condition is maintained;
- provide opportunities for education based on the area's values;
- provide for scientific research directed at benefiting management.

The management of the Nature Reserve is guided by the statutory management plan (Department of Parks, Wildlife and Heritage, Tasmania 1991).

The management plan particularly specifies objects of management that include conducting, promoting and encouraging research and controlling previously introduced species which affect or endanger native species.

## NATURE CONSERVATION VALUES

Macquarie Island has never before been connected to any other continental land mass and the biota has resulted from long distance dispersal and in a few instances from human transport.

The terrestrial flora has subantarctic elements found nowhere else in the area and the fauna includes species that breed nowhere else in the region.

The reserve is an essential land base for many species of marine birds and mammals during moulting and breeding stages.

The reserve is thought to be the best preserved fragment of the world's ocean crust known above sea level.

## CULTURAL AND SOCIAL VALUES

Macquarie Island was one of the earliest sites occupied by Europeans in Australia (1810) and of particular significance in that its occupation was carried out by private enterprise.

## REASON FOR CLASSIFICATION AS CATEGORY 1V

The reserve is selected for this category because it is important for nature conservation, the protection of its habitat is essential for the well being of nationally important fauna and the conservation of these habitats and species depends on active intervention by the management authority.

## 5.7 Taunton National Park (Scientific), QLD (23°20'S/149°13'E)

### DESIGNATION

Taunton National Park (Scientific) of 11,626 hectares was dedicated under the *Nature Conservation Act 1992* in 1994. The area was previously a Scientific Purposes Reserve, protected since 1979.

### LEGAL BASIS OF MANAGEMENT

Taunton National Park (Scientific) is managed under the provisions of the *Nature Conservation Act 1992*. The management principles in section 16 of the Act require that a national park (scientific) is to be managed to:

- (a) protect the area's exceptional scientific values and, in particular-
  - (i) to ensure that the processes of nature continue unaffected in the area; and
  - (ii) to protect the area's biological diversity to the greatest possible extent; and

- (b) allow for the controlled scientific study and monitoring of the area's natural resources.

However, if threatened wildlife is a significant natural resource for the area, the management of the area may include-

- (a) manipulation of the wildlife's habitat; and
- (b) the control of the threatening process relating to the wildlife, including threatening processes caused by other wildlife.

## IN SITU MANAGEMENT

Taunton National Park (Scientific) is managed to protect and maximise numbers of the Bridled Nailtail Wallaby (*Onychogalea fraenata*), without compromising the sustainability of the park. The Bridled Nailtail Wallaby is an edge-dwelling species which relies on dense Brigalow for shelter and adjacent grassy areas in which to feed. The habitat in the park is manipulated to favour these requirements. Some brigalow regrowth is cleared in order to promote feeding areas adjacent to shelter, and areas are being sown with exotic Buffel Grass (*Cenchrus ciliaris*) as a food source. The effects of various burning and slashing regimes are also being investigated.

## NATURE CONSERVATION VALUES

Taunton National Park (Scientific) is the only reserve known to contain the endangered Bridled Nailtail Wallaby (*Onychogalea fraenata*). This species was thought to have become extinct in the 1920s, but was rediscovered in 1973 in a restricted area on Taunton and an adjoining property.

The park also conserves a large population of Black-striped Wallabies (*Macropus dorsalis*). Vegetation includes Brigalow (*Acacia harpophylla*) and Brigalow associated plant communities.

The park is an important site for research and scientific study of the Bridled Nailtail Wallaby and its habitat, including the effects of habitat manipulation, which may have application to other species and situations.

## CULTURAL AND SOCIAL VALUES

The area has been dedicated as a national park (scientific) for its value in ensuring the continued survival of the endangered Bridled Nailtail Wallaby.

## REASON FOR CLASSIFICATION AS CATEGORY IV

Taunton National Park (Scientific) falls into Category IV due to the habitat manipulation carried out to promote conditions that favour the Bridled Nailtail Wallaby population, for example the clearing of areas of native vegetation and the sowing of exotic grass. This major intervention precludes listing of the area as Category Ia, Strict Nature Reserve.

## **6 CATEGORY V: Protected Landscape/Seascape**

### **6.1 Wimmera Heritage River, Vic (37° 46'S/142° 87'E)**

#### **DESIGNATION**

The Wimmera Heritage River was established under the provisions of the *Heritage Rivers Act (1992)* in 1992, and covers a total area of 56,020 ha.

#### **LEGAL BASIS OF MANAGEMENT**

The Wimmera Heritage River is listed in Schedule 1 of the *Heritage Rivers Act (1992)*. The key objectives are the protection of public land with significant nature conservation, recreation, scenic or cultural heritage attributes. The Act requires a management plan to be prepared for all heritage rivers.

The Heritage River overlays a number of different land tenures, including protected areas. As the *Heritage Rivers Act (1992)* does not extinguish existing land tenure, acts relevant to the underlying land tenure also continue to apply. With respect to the Wimmera Heritage River, these include the *National Parks Act (1975)* and the *Crown Land (Reserves) Act*.

Parts of the river corridor are managed in accordance with the Mallee Parks Draft Strategy (Department of Conservation and Natural Resources 1995) and the Little Desert National Park Management Plan (Department of Natural Resources and Environment 1996).

Land Conservation Council recommendations approved by Government under the *Land Conservation Act 1970* also direct the management of the Heritage River (see below).

#### **IN SITU MANAGEMENT**

The Land Conservation Council's Final Recommendations for the Rivers and Streams Special Investigation (1991) specified that the managing authority of a heritage river must:

- (a) take all reasonable steps to ensure that the significant nature, conservation, recreation, scenic or cultural heritage attributes are protected.
- (b) subject to (1), take all reasonable steps to provide opportunities for other recreational activities, landscape appreciation and education within the area;
- (c) take all reasonable steps to ensure that that part of the river which is in the area is maintained without further interference with its free flowing state; and
- (d) be managed in accordance with other policy recommendations made by the Land Conservation Council (with respect particularly to resource use).

Where it is consistent with the protection of the river's natural, cultural, recreational and scenic values, resource use, especially where it contributes to the maintenance of local lifestyles such as water use, wood collection, and grazing, is permitted under licence.

#### **REGIONAL SETTING**

The Wimmera Heritage River corridor extends along the Wimmera River from Polkemmet Bridge near Dimboola, past Lake Hindmarsh and on to the Outlet Creek system and its terminal lakes - Albacutya and ultimately Wirrenghren Plain in Wyperfeld National Park.

The entire heritage corridor is on public land, for much of its length adjacent to private land, incorporating a range of land tenures: Wyperfeld National Park, Outlet Creek Education Area, Lake Albacutya Park, Lake Hindmarsh Lake Reserve, public land water frontage reserve, Little Desert National Park and State forest.

The width of the heritage corridor is irregular, varying from the width of the public land water frontage reserve to 10 km at the terminal lakes to include the lake-beds and their margins. It lies entirely within the Murray-Darling Depression interim biogeographic unit.

## NATURE CONSERVATION VALUES

The Wimmera River is the major permanent watercourse in north-west Victoria. When full, Lake Hindmarsh is the largest natural fresh-water body in Victoria. The river corridor contains some of the last surviving associations of river red gum and black box in an otherwise largely cleared landscape, together with riparian communities with intact understorey. As such, it provides essential habitat for fauna, especially birdlife, and instream fauna.

## CULTURAL AND SOCIAL VALUES

Aboriginal people occupied the Wimmera area for at least 10,000 years. The river was a focus for traditional Aboriginal society and was also a feature of mythological landscape for the Wergaia. Local Aboriginal communities continue a strong association with the area today. A number of sites including scarred trees, mounds, and surface scatters survive along the river corridor.

After European settlement the area was used for rough grazing of sheep and cattle and much of the area was cleared.

Today the river is a key landscape feature of the region. As the only permanent water source in the areas, it is also heavily relied upon by the local community for water and other resources and is a recreational focus for local townspeople.

## REASON FOR CLASSIFICATION AS CATEGORY V

The Wimmera Heritage River falls into Category V, Protected Landscape/Seascape: Protected area managed mainly for landscape/seascape conservation and recreation.

While the key management objective for heritage rivers is the equivalent of maintenance of biodiversity, it is also recognised that activities at a local level which have been a part of the landscape for some time such as water off-take, grazing, apiculture and a small amount of wood production, are compatible under certain conditions in specified areas. Where the heritage river overlays a scheduled park or reserve already classed as a protected area, it has been assigned the category of the underlying land.

## 7 CATEGORY VI: *Managed Resource Protected Area*

### 7.1 Innamincka Regional Reserve, SA (140° 27'28.7"E/27° 38'15.5"S)

#### DESIGNATION

Innamincka Regional Reserve was established under the provisions of the *National Parks and Wildlife Act (1972)* in 1988. It covers an area of 1381995 hectares of former pastoral lease land now owned by the Minister for the Environment and Natural Resources.

#### LEGAL BASIS FOR MANAGEMENT

Section 43 of the *National Parks and Wildlife Act (1972)* provides for the proclamation by the Governor of Game Reserves: areas proclaimed for the purpose of conserving any wildlife or the natural or historic features of that land while, at the same time, permitting the utilisation of the natural resources of that land (ie. mining and pastoralism). A resolution of both Houses of Parliament is necessary before any part of a regional reserve can be abolished.

Management of Innamincka Regional Reserve is guided by the *Innamincka Regional Reserve Management Plan (1992)* as required by the *National Parks and Wildlife Act*. Coongie Lakes within Innamincka Regional Reserve are RAMSAR wetlands of international significance that is managed in accordance with international conventions on wetlands and migratory birds.

#### IN SITU MANAGEMENT

Management of Innamincka Regional Reserve is through a management plan, a board of management and environmental management committees with the various user groups. The focus of management is to facilitate the use of natural resources by the mining and pastoral industries while maximising the conservation and protection of natural and cultural heritage. The reserve has general use, special interest and conservation zones to facilitate appropriate use and protection of natural resources and natural and cultural heritage. The mining and pastoral use of Innamincka is subject to regular monitoring and environmental audits which are considered at each ten year review of the management of Innamincka Regional Reserve.

#### GEOGRAPHY

Innamincka Regional Reserve is located in the north east corner of South Australia about 1500 kilometres from Adelaide. It is located over the Cooper Basin, Australia's largest onshore oil and gas reserve. It covers ecosystems of the Simpson Desert and the Cooper Creek floodplain within the Lake Eyre Basin.

#### NATURE CONSERVATION VALUES

The main channel and floodplain of Cooper Creek is habitat for a unique range of arid zone fauna. Coongie Lake are semi-permanent lakes and very important as water bird habitat and refuge for native fish stocks that is recognised as a RAMSAR wetland of international importance protected within the Coongie Lakes conservation zone.

Marqualpie dunes are important bloodwood and desert lime habitat, threatened species in South Australia.

The following rare and endangered fauna have been recorded in Innamincka; Dusky Hopping-mouse, Forrest's Mouse, kultarr, Plains Mouse (Plains Rat) and the Yellow-bellied Sheathtail Bat.

#### CULTURAL AND SOCIAL VALUES

Aboriginal sites: there is a full range of site types scattered through the region.

**Exploration:** Sturt, Gregory, Burke and Wills travelled through the area on their search for the inland sea.

**Pastoral:** The area steeped in history, some examples of early pastoralism include; stock routes, rabbit proof fencing, and outstations

**Mining:** Early exploration for petroleum. Moomba was one of the first gas and oil fields established on mainland Australia.

Fishing, camping and sightseeing is mainly concentrated around the Cullyamurra Water Hole and the water holes close to Innamincka. The area north of Cooper Creek has limited access and its remoteness creates a sense of good quality wilderness.

## REASON FOR CLASSIFICATION AS A CATEGORY VI:

Innamincka Regional Reserve is considered to be an IUCN category VI because it provides for the managed use of natural resources while protecting essential natural and cultural values through legal and other effective means.

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## 7.2 Jack Smith Lake State Game Reserve, Vic (38° 30'S/147° 00'E)

### DESIGNATION

Jack Smith Lake State Game Reserve is reserved for management of wildlife and the preservation of wildlife habitat under Section 4(1)(o) of the *Crown Land (Reserves) Act 1978*. It covers 2,730 ha of Crown Land managed by the Department of Natural Resources and Environment.

### LEGAL BASIS OF MANAGEMENT

The Reserve is proclaimed under the *Crown Land (Reserves) Act 1978* for management of wildlife and the preservation of wildlife. This effectively gives the reserved land the status of State Wildlife Reserve pursuant to the *Wildlife Act 1975*. In addition, under Section 15(2) of the same Act, the reserved land is classified as a State Game Reserve allowing duck, quail and Hog Deer hunting within the respective hunting seasons.

### IN SITU MANAGEMENT

Management of the reserve is guided by the Jack Smith Lake State Game Reserve Management Plan (Department of Conservation and Environment 1991). In addition, the Land Conservation Council in its South Gippsland Area 2 Final Recommendations (1982) made recommendations specific to Jack Smith Lake State Game Reserve that the area be used:

- (i) primarily to conserve the habitat of native animals, particularly water birds;
- (ii) for public recreation and education where this does not conflict with the primary aim; and
- (iii) grazing be permitted at the discretion of the managing authority.

### REGIONAL SETTING

The Reserve is located in South Gippsland about 260 kilometres south east of Melbourne. It is a large coastal wetland and the only area of public land in the region set aside primarily for the purpose of game management and game hunting. The Reserve is located in the South East Coastal Plain interim biogeographic unit.

### NATURE CONSERVATION VALUES

Vegetation communities include native wet grasslands in the fringes of the wetter areas, saltmarsh, tall shrublands, and remnants of coastal vegetation communities. The reserve is particularly important for waders, 19 of which are listed on both the Japan-Australian and the China-Australian Migratory Birds Agreements.

## CULTURAL AND SOCIAL VALUES

The Jack Smith Lake was occupied by the Brataualung clan, one of the Kurnai group of Gippsland. Aboriginal people have occupied Gippsland for at least 18,000 years. A number of unique shell midden deposits have been located in the Reserve. Aboriginal people in the area continue to have a strong association with the area today. Pastoral activities occurred over the site but significant non-Aboriginal sites have not been recorded.

Hunting has been a long-standing use of the area and remains the most popular activity in the Reserve.

## REASON FOR CLASSIFICATION AS CATEGORY VI

Jack Smith State Game Reserve, falls into Category VI, Managed Resource Protected Area: Protected area managed mainly for the sustainable use of natural ecosystems, on the basis that utilisation of natural resources (hunting and grazing) is allowed. Although the key management objective is not 'mainly for the sustainable use of ecosystems', Category VI is the only category that provides satisfactorily for such utilisation to occur.

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### 7.3 Mary River Conservation Reserve, NT (Approx. 12° 23' S/131° 37' E)

#### DESIGNATION

Mary River Conservation Reserve covers an area of 270 square kilometres and was declared under Section 9(4) of the *Territory Parks and Wildlife Conservation Act* in 1988. The Reserve is currently the subject of an claim under the Commonwealth *Aboriginal Land Rights (NT) Act*.

#### LEGAL BASIS OF MANAGEMENT

Being declared under the *Territory Parks and Wildlife Conservation Act*, the Reserve is managed by the Parks and Wildlife Commission of the Northern Territory for the purposes of flora and fauna conservation. The Reserve is also the subject of an agreement with a local property owner for cattle grazing during the dry season.

#### IN SITU MANAGEMENT

The Parks and Wildlife Commission expends considerable resources on an active monitoring and management program within the Conservation Reserve.

Plant communities are monitored under an on-going program to determine the extent and impacts of grazing, fire, saltwater intrusion, and the spread of introduced pasture grasses within the Conservation Reserve. Research is particularly targeting the presence of aggressively invasive exotic grasses and the potential for grazing to exacerbate their spread.

Programs for the management of fire, feral animals and introduced plants and fencing for control of stock are in place. These programs are subject to the terms of the agreement between the Parks and Wildlife Commission and the agistee and, in some instances, are undertaken on a cooperative basis.

Management of floodplain vegetation to meet the needs of different fauna poses a considerable challenge. For example, magpie geese with newly hatched young seek out sites where vegetation has been disturbed and annual grasses and areas of open water suited to the foraging behaviour of goslings predominate. Combinations of grazing and the use of fire are capable of producing the necessary conditions. Other species are favoured by relatively undisturbed conditions. By managing the wetlands to produce a mosaic of disturbed and relatively stable habitats conditions capable of supporting a wide range of species is created.

## GEOGRAPHY

Mary River Conservation reserve consists of riverine floodplains and coastal plains which form a component of the extensive Mary River Wetlands system mid-way between Darwin and Kakadu. Stream channels meander through the area. Upstream, freshwater billabongs are evident in the late dry season, while the downstream reaches are tidal.

## NATURE CONSERVATION VALUES

The Reserve is an important breeding and nursery ground for waterfowl during the wet season (November to April). In particular, populations of the magpie goose (*Anseranas semipalmata*), Radjah shelduck (*Tadonna radjah*), and egret (*Egretta spp.*) species rely on the seasonal wetlands for breeding and feeding grounds. The Conservation Reserve incorporates portions of the Mary River Floodplain, with patches of monsoon forest and coastal and subcoastal wetlands. Heavy concentrations of the file snake (*Acrochordidae sp.*) occur within the Reserve at Alligator Head.

## CULTURAL AND SOCIAL VALUES

Aboriginal sites occur within the Reserve, although these have not been systematically documented. The Reserve is of economic importance to the local grazing industry for dry season cattle production.

## REASONS FOR CLASSIFICATION AS MANAGED RESOURCE PROTECTED AREA

The Mary River Conservation Reserve is classified in Category VI due to its management for continued sustainable cattle production within a matrix of maintenance of biodiversity. The area remains a productive breeding and nursery ground for waterfowl while also providing sustainable economic returns to the local economy.

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### **7.4 Shoalwater Islands Marine Park, WA (115°42'E/32°19'S)**

#### DESIGNATION:

Shoalwater Islands Marine Park was declared in 1990 under the *Conservation and Land Management Act (WA)*. It comprises a reserve of 6,545 ha, vested in the National Parks and Nature Conservation Authority.

#### LEGAL BASIS OF MANAGEMENT:

The reserve is managed by the Department of Conservation and Land Management on behalf of the National Parks and Nature Conservation Authority.

The reservation as a marine park is to conserve flora and fauna and their habitats. It also provides for a range of compatible recreational and commercial uses. The Fisheries Department has responsibility for commercial and recreational fishing, the Department of Transport for all boating and navigation, and the WA Maritime Museum for shipwrecks.

#### MANAGEMENT OF THE RESERVE:

The reserve's management plan defines management goals under the headings of conservation, recreation, community relations, commercial and other uses, research and monitoring, and interaction with nearby lands and waters.



## REGIONAL SETTING:

Shoalwater Islands Marine Park is an area of ocean surrounding the islands of Shoalwater Bay and Warnbro Sound, near Rockingham, a southern suburb of Perth. It extends from the coast seawards to between one and six kilometres.

## NATURE CONSERVATION VALUES:

The Park contains rich and diverse marine communities resulting from its extensive variety of marine habitats, including limestone reefs, seagrass beds and sandy seafloors. Seagrass beds in shallow sandy areas contribute to primary production and species diversity. The deep silty basins of Warnbro Sound contain a distinctive mixture of temperate and tropical invertebrate animals.

## CULTURAL AND SOCIAL VALUES:

Located adjacent to the Perth Metropolitan Region, the Park is easily accessible to more than three quarters of the State's population. Recreation includes boating, sailing, windsurfing, water-skiing, snorkelling and diving, as well as recreational fishing. School groups, tertiary institutions and outdoor organisations use the Park for environmental education.

The Park's marine habitats support a valuable commercial fishing industry, which harvests rock lobster, abalone, mussels and a variety of fish species. Another commercial use is nature-based tourism, comprising dive charters and boat tours.

## REASON FOR CLASSIFICATION AS CATEGORY VI

Commercial fishing is a major use of Shoalwater Islands Marine Park. This is regulated and managed by the Fisheries Department in consultation with the Department of Conservation and Land Management. The management plan allows commercial fishing in the Park (within a General Use zone), managed so as not to affect the Park's values to conservation and recreation.

## **8 NOT A PROTECTED AREA**

### **8.1 Wiseman's Ferry Historic Site, NSW (33°24'S/150°59'E)**

#### **DESIGNATION:**

Wiseman's Ferry Historic Site was dedicated under the provisions of the *National Parks and Wildlife Act 1974* (NSW) in 1986. It covers 21 hectares which are owned by the NSW National Parks and Wildlife Service.

#### **LEGAL BASIS OF MANAGEMENT:**

Historic Sites are sites of buildings, objects, monuments or landscapes of national importance and are conserved under the provisions of the *National Parks and Wildlife Act*.

#### **IN SITU MANAGEMENT:**

The management of this area aims to secure, protect and offer interpretation of a Colonial convict work camp and stockade. Conservation of adjoining Hawkesbury sandstone bushland is also a high priority.

#### **CULTURAL AND SOCIAL VALUES:**

Wiseman's Ferry Historic Site protects the remains of a colonial convict work camp. The camp dates from around 1820 and was used to stockade labourers who built the Great Northern Road. This convict camp is the only known existing example of such a site which has not been modified by surrounding development.

The historic remains are surrounded by eucalypt woodlands based on Hawkesbury sandstone. The ridge top location offers highly scenic vistas. Within, and immediately adjacent to the Historic Site boundary, there are a number of Aboriginal rock engravings. Steep faces of rock are all that remain of the quarried areas from which stone was drawn for use on the Great North Road.

#### **REASON FOR NOT CLASSIFYING THE SITE:**

The major conservation objectives for this area are the preservation and protection of a man-made feature of the landscape, namely the stockade. The area should not be classified against the IUCN Guidelines as it does not fulfil the criteria of a protected area.

## ***APPENDIX 2. KEY OBJECTIVES AND GOALS OF CATEGORIES***

This appendix presents a set of tables and figures which illustrate the key objectives and goals of the IUCN categories. A number of the tables and figures were developed and/or discussed during the Technical Workshop held in June 1994.

The tables and figures are presented in fold-out form to enable them to be examined in conjunction with other parts of the handbook.

**Figure 1: KEY FOR IUCN PROTECTED AREA CLASSIFICATION**

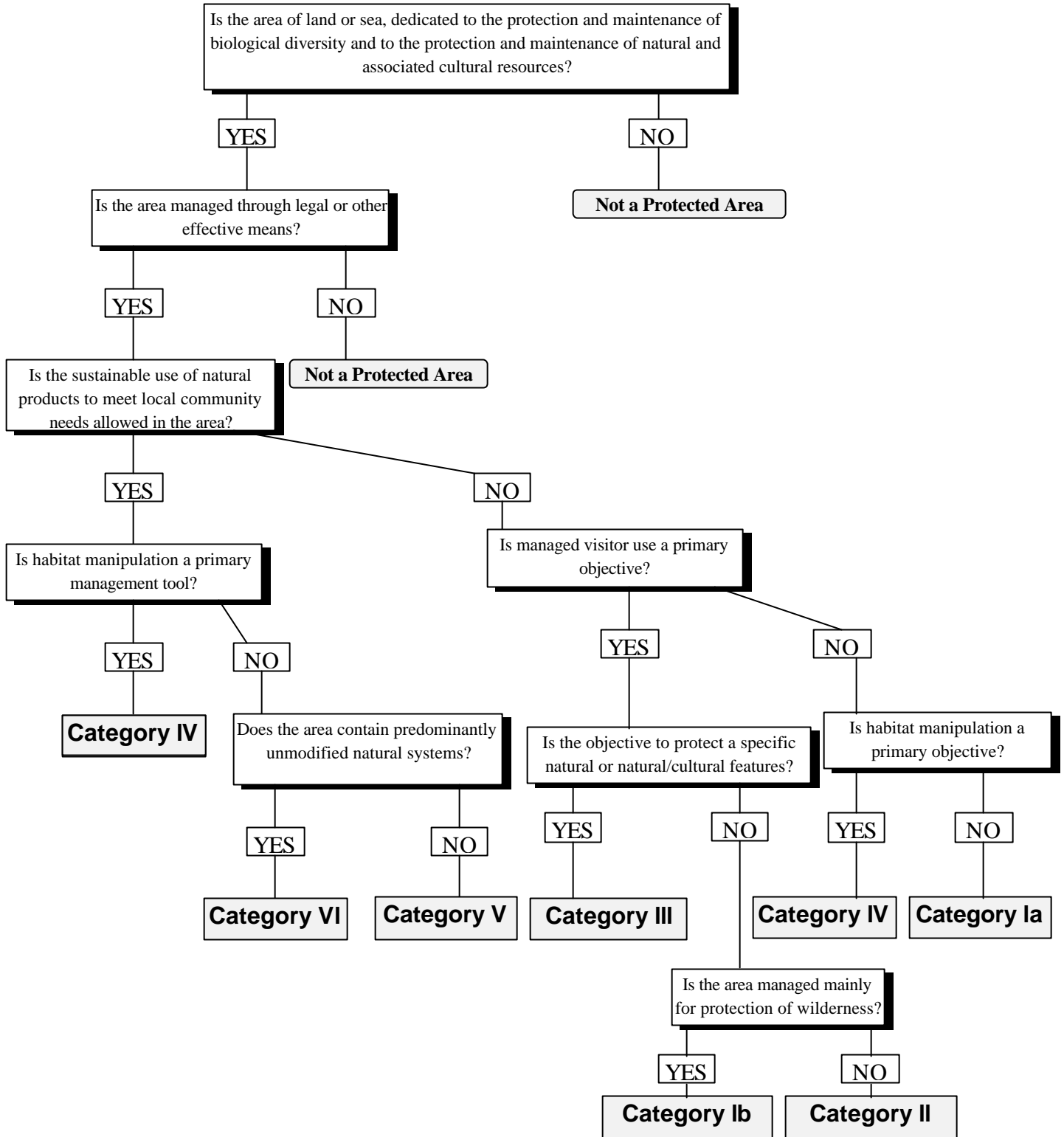
Notes

Figure 1: KEY FOR IUCN PROTECTED AREA CLASSIFICATION

A draft key for classification of protected areas was developed during the 1994 Technical Workshop and has been adapted for this Handbook. The key uses management objectives used in the IUCN Guidelines, along with extracts from the definitions and guidelines for selection. Note that in using this key:

the IUCN Guidelines and this Handbook should be consulted to verify any decision.

this is not a perfect fit, rather a best fit exercise.



**Table 1: SUMMARY OF IUCN GUIDELINES FOR PROTECTED AREA  
MANAGEMENT CATEGORIES**

Notes

Table 1: **SUMMARY OF IUCN GUIDELINES FOR PROTECTED AREA MANAGEMENT CATEGORIES**

**Category Ia Strict Nature Reserve: protected area managed mainly for science**

Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

**Category Ib Wilderness Area: protected area managed mainly for wilderness protection**

Large area of unmodified or slightly modified land and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

**Category II National Park: protected area managed mainly for ecosystem conservation and recreation**

Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for this and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

**Category III Natural Monument: protected area managed for conservation of specific natural features**

Area containing one or more specific natural or natural/cultural feature which is of outstanding value because of its inherent rarity, representative or aesthetic qualities or cultural significance.

**Category IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention**

Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

**Category V Protected Landscape/Seascape: protected areas managed mainly for landscape/seascape conservation and recreation**

Area of land, with coast and seas as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, cultural and/or ecological value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

**Category VI Managed Resource protected areas: protected area managed mainly for the sustainable use of natural ecosystems**

Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

**Table 2: GUIDE TO IUCN PRIORITISATION OF PROTECTED AREA OBJECTIVES**

Notes



Table 2: **GUIDE TO IUCN PRIORITISATION OF PROTECTED AREA OBJECTIVES**

Table 2 below is reproduced from the IUCN Guidelines. It identifies the prime objectives of each of the seven categories, and lists in order of relevance other objectives that are related to each category.

<b>Objectives</b>	<b>Ia</b>	<b>Ib</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>
Scientific research	1	3	2	2	2	2	3
Wilderness protection	2	1	2	3	3	-	2
Preserve species and genetic diversity	1	2	1	1	1	2	1
Maintain environmental services	2	1	1	-	1	2	1
Protection of natural/cultural features	-	-	2	1	3	1	3
Tourism and recreation	-	2	1	1	3	1	3
Education	-	-	2	2	2	2	3
Sustainable use of natural ecosystem	-	3	3	-	2	2	1
Maintain cultural/traditional attributes	-	-	-	-	-	1	2

1 = Primary Objective  
3 = Acceptable Objective

2 = Secondary Objective  
- = Not Applicable

**Figure 2: LEVEL OF HUMAN INFLUENCE FOR IUCN CATEGORIES**

Figure 1 below was presented to the 1994 Technical Workshop by Adrian Phillips, Chair of IUCN Commission on National Parks and Protected Areas. It describes the general relationship between the level of human intervention in an area and the IUCN Categories.

There is progression from categories I to V with regard to increasing level of human intervention. Category VI is an anomaly that does not fall in sequence. As category V is designed to protect examples of the interaction of humans with their surrounding landscape, it by definition provides for a greater level of human intervention than category VI. At no stage does human intervention reach high levels for any of the categories ie on the axis labelled *Natural/Artificial*.

