The Tasmanian Reserve Management Code of Practice
The Tasmanian Reserve Management Code of Practice will be reviewed at five-yearly intervals and changes will be incorporated to ensure that best practice techniques and approaches to reserve management are incorporated.

In addition, a parallel review of the Mineral Exploration Code of Practice is proposed so that the two Codes will be consistent in relation to activities where both Codes apply.

General enquiries should be directed to:
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How to use the Code

The Tasmanian Reserve Management Code of Practice (the Code) is divided into four parts. These parts are divided into broad sections that are then sub-divided into subject areas.

Part A, Introduction – provides background information about the Code, where it applies, and importantly, who the Code has been developed for. This part also provides the principles of natural and cultural heritage management and reserve management.

Part B, Guidelines for Activities – is the prescriptive component of the Code to which reserve managers are required to adhere. It provides the ‘rules’ for many reserve management activities. Part B also covers the key elements of activity assessment but does not include assessment procedures. The latter are subject to agency policy and administrative arrangements and reserve managers should refer to these.

Each subject area within Part B has two main components:

GENERAL PRINCIPLES – provides the principles of management, relevant definitions, legislation and sources of information.

BASIC APPROACH – contains the management prescriptions specifying how the principal activities associated with the subject are conducted.

In the Basic Approach there are two types of statement:

The ‘will’ statement is to be applied in a practical manner to activities undertaken in reserves. Statements of this kind indicate that the action will be implemented without exception.

The ‘should’ statement indicates the desirable practice for most situations and is to be interpreted by the reserve manager. Statements of this kind indicate that the action is highly desirable and will be implemented unless there is good reason for making exceptions and acceptable environmental outcomes can still be achieved.

This approach is similar to that adopted in the Forest Practices Code.

Part C, Approval Processes, Statutory Powers and Third Party Activity Assessment – briefly outlines Tasmanian and Commonwealth legislation that relates to planning, reserve management and values conservation with an emphasis on the authority the legislation confers for the conduct of activities in reserves. Activities that are assessed and controlled by other legislation, but can occur on reserved land, are also outlined.

Background information and guidelines for assessing third party minor activities are provided for reserve managers who are required to assess applications for using reserved land. These are guidelines only and are not prescriptive. Procedures are subject to agency policy and administrative arrangements. Reserve managers should refer to these.

Part D, Acronyms, Glossary, Key Sources and Appendix – provides lists of useful terms, references and web sites as well as the Appendix.

When using the Code to obtain guidance for a management issue or activity, users should first look for information specific to the proposed activity (e.g. fire management, built structures, weed control). Subject areas are cross-referenced to other sections in the Code that may have some bearing on how an activity is conducted.

Citing of references has been kept as simple as possible and, as such, does not rigorously adhere to one convention. Where a date is not given for a manual, code or policy, it should be assumed that the latest version of the document is referred to. This approach takes into account revisions and updates of these documents.

Two symbols are used in the code:

- This symbol refers to other sections of the Code or other key documents that contain information or prescriptions relevant to an activity.

- This symbol identifies situations where specialist advice should be sought.
INTRODUCTION

1 Context
2 Guiding Principles
1 Context

1.1 Background

The Tasmanian Reserve Management Code of Practice (the Code) is the result of a commitment under the Tasmanian Regional Forest Agreement (RFA) to develop and implement a code of practice to cover all environmental practices in reserves. The Code is seen as an important element in the framework for protecting conservation values encompassed by the Comprehensive, Adequate and Representative (CAR) reserve system, which was expanded under the RFA to meet agreed reservation targets for wilderness, old growth forest and biodiversity.

It will complement other management codes of practice, such as the Forest Practices Code, Quarry Code of Practice and Mineral Exploration Code of Practice.

Under Clause 94 of the RFA, implementation of the Code will be subject to annual compliance audits. It will also be subject to five-yearly independent expert review. Opportunities for community input into this process will be provided. The independent review will be facilitated if the application of the Code has been monitored in terms of both compliance and the achievement of desired outcomes.

In order to achieve an acceptable level of compliance, staff training will be an integral part of the Code’s implementation. Established training programs will be utilised where possible.

THE OBJECTIVES OF THE CODE ARE TO:

1. Document appropriate management practices and standards for lands formally reserved for conservation in Tasmania;
2. Promote consistency in management practices and standards across the range of reserve types and tenures, subject to the statutory objectives of the different reserve classes;
3. Provide an assessment and planning tool by documenting relevant standards and providing an overview of statutory assessment and approval processes;
4. Improve transparency to the public of the management systems and procedures for reserved lands, and provide opportunities for public input (through public comment on a draft code and at five-yearly reviews); and
5. Provide links and consistency between this Code, the Forest Practices Code, the Quarry Code of Practice and the Mineral Exploration Code of Practice, as they apply to activities within reserves.

1.2 What Does the Code Do?

The Code specifies appropriate standards and practices for new activities in any land-based reserve that have been assessed and approved through reserve planning processes.

The Code will contribute to the protection of natural and cultural values including the National Estate values within reserves identified under the RFA.

It is important to note that the Code applies only to activities compatible with the Management Objectives for the particular class of reserve as specified in the Schedules of the National Parks and Reserves Management Act 2002, the Forestry Act 1920, and the Crown Lands Act 1976.

Activities are subject to the provisions of any applicable management plan. Management objectives for the different classes of reserve are set out in Appendix 1.

Importantly, the Code does not give authority for the activities described in the Code to be conducted in reserves but aims to guide their conduct where approvals have been obtained through statutory or agency administrative procedures.

The Code provides information and guidance for activities except where there is an inconsistency with policy in a statutory management plan, then the management plan takes precedence.

It is recognised that management plans and strategies aim to provide an overarching framework for future management of reserves while the Code primarily provides best practice operational standards. It does not aim to replace detailed project planning and environmental impact assessment processes employed by reserve managers.
1.3 Where Does the Code Apply?

The Code applies to all land-based reserves managed under the National Parks and Reserves Management Act 2002, to forest reserves under the Forestry Act 1920, and to certain public reserves under the Crown Lands Act 1976.

The Code applies to those public reserves that have significant natural and cultural values and are still in a largely natural condition. It does not apply to public reserves that have been highly modified and developed such as school grounds. Those public reserves to which the Code will apply will be identified as resources permit. There are several thousand of these reserves in Tasmania.

Although the Code directly applies to reserved land, it can also be used, where appropriate, to guide activities that commonly occur on unallocated Crown land between high and low water mark.

The Code may also apply to covenanted or reserved private land where agreed to by the landowner and referred to in the covenant, management agreement or conservation plan for the land.

This version of the Code does not apply to marine areas within reserves. Although there is overlap in reserve management practices for marine and land-based areas, marine areas are beyond the scope of this initial version of the Code.

1.4 Who Needs to Use this Code?

The Tasmanian Reserve Management Code of Practice is primarily aimed at reserve managers – the people or organisations responsible for managing lands reserved for conservation in Tasmania. The Parks and Wildlife Service and Forestry Tasmania manage the majority of Tasmania’s formal reserves and are required to undertake activities in accordance with this Code.

In the future, local government and conservation management trusts who manage the balance of reserves covered by the National Parks and Reserves Management Act 2002 may also be required to meet the provisions of this Code where specified by a lease or approval conditions.

In addition, landowners managing private reserves under agreement may also wish to use specified sections of this Code for managing values. Where this occurs, the Code may be referred to in the negotiated management agreement.

Community groups and individuals who are planning conservation projects on reserved or private land can also use this Code for guidance.

The Code is most relevant to the reserve-based management activities of field staff such as rangers and foresters and does not aim to guide specialist activities (eg. research, survey management and recording) which are normally directed by professional standards and systems. However, activities by specialists must still conform to Code standards.

Where a contractor carries out a management activity, it is the responsibility of the reserve manager to ensure that the activities are conducted in accordance with this Code.

Proponents who carry out non-departmental activities under an issued authority such as a lease, licence, permit or exemption need to be aware of the Code but are not required to interpret it. They may, however, be subject to the provisions of the Code through their obligation to meet the conditions placed on their operation in a reserve.

The Code should be referred to by the reserve manager during the assessment of applications for an authority, lease, licence or permit, or exemption applications for activities within reserves, to ensure that activities can meet the requirements of the Code.

The Code is not aimed at reserve visitors, although it prescribes codes of conduct for recreational activities with which visitors are encouraged to comply.
2 Guiding Principles

This section sets out the guiding principles for all aspects of reserve management. They are based on:

- The Australian Natural Heritage Charter: Standards and principles for the conservation of places of natural heritage significance; and
- The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter).

The primary objective of reserves is the conservation of natural and cultural values. The following principles assist in achieving this and reserve activities should be underpinned by them.

### PRINCIPLES OF NATURAL AND CULTURAL HERITAGE MANAGEMENT

1. **Principle of Inter-generational Equity** – This generation should ensure that the health, diversity and productivity of the environment and the integrity and significance of cultural places are maintained or enhanced for the benefit of current and future generations.

2. **Principle of Intra-generational Equity** – The policies and decisions that affect current generations must incorporate social equity measures to ensure the equitable distribution of costs and benefits.

3. **Principle of Existence Value** – Living organisms, earth processes and ecosystems may have value beyond the social, economic or cultural values held by humans.

4. **Principle of Inter-dependency** – Natural systems are made up of inter-dependent components linked by natural processes. An action that affects one part of the system will also affect other parts; no part of the system should be managed without regard to its role within the system and its inter-dependency on other parts of the system.

5. **Principle of Uncertainty** – Our knowledge of natural and cultural heritage and the processes affecting them is incomplete, and the full potential significance or value of natural and cultural heritage remains unknown because of this uncertain state of knowledge.

6. **Precautionary Principle** – Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation or harmful disturbance to cultural places. Application of this principle should be guided by (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage, and (ii) an assessment of the risk-weighted consequences of various options.

7. **Principle of Ecological Sustainability** – Decision-making processes should include both long- and short-term considerations, and in particular should maintain geodiversity and biodiversity, the physical and ecological processes that support natural diversity, and the effective functional role of ecosystems and of natural diversity within those systems.

8. **Principle of Indigenous People's Rights** – Decision-making processes should recognise the rights, and take into account the interests, of Tasmania’s indigenous people.

9. **Principle of Community Involvement** – Decision-making processes should provide for broad and meaningful community involvement in issues that affect them, without being dominated or determined by particular sectors or interests.

10. **Principle of Transparency of Decision-making** – The framework and processes for decision-making should be transparent, and the basis of decisions should be accessible to the public.
1. Protection and maintenance of natural and cultural values is a fundamental objective in managing reserved areas and should direct all aspects of management. As far as practicable, the effects of management on the full range of natural and cultural values should be considered in determining appropriate practices.

2. Threatening processes which are degrading, or which could degrade, the natural and cultural values of the reserve should be identified. Strategies to avoid or ameliorate the threatening processes should be developed and implemented.

3. Restoration of degraded sites should be considered where this can promote the reserve management objectives and has been identified as a management priority through the planning process.

4. A systematic planning process is fundamental to good reserve management practices. The planning process should provide a framework for integrating the multiple objectives and uses for which reserves are managed in a strategic and cost-effective way and including strategies for avoiding or ameliorating threatening processes.

5. Good data are essential for informed decision-making. Where existing data are inadequate to predict the effects of a management action with reasonable certainty, a process should be developed to improve the data available for decision-making. However, where the impacts of an activity can be reasonably predicted on the basis of scientific study and past experience, incomplete data should not be the principal reason for preventing an activity from proceeding.

6. The significance of values should be assessed and a statement of policy developed which identifies management options for their protection.

7. Appropriate strategies should be developed and implemented through a management plan or other management, planning or policy document.

8. Resource requirements and responsibilities for implementing management strategies should be identified in the planning process.

9. Community involvement in the management of a reserve should be promoted through consultative processes and, where feasible, in collaboration with community groups.

10. A collaborative approach with Tasmania’s indigenous people should be promoted through joint management initiatives and other appropriate mechanisms.

11. Monitoring of management performance and outcomes should be ongoing. If monitoring indicates that benchmarks are not being achieved, the management approach should be modified to develop a more effective approach.

12. A record of decisions and actions should be maintained to promote transparency and facilitate evaluation of management procedures.

PRINCIPLES OF RESERVE MANAGEMENT

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3.0 Activity Assessment
4.0 Looking After Reserve Values
  4.1 Geodiversity
  4.2 Flora and Fauna Values
  4.3 Landscape
  4.4 Wilderness and Wild Rivers
  4.5 Cultural Values
  4.6 Social Values
  4.7 Recreational Values
  4.8 Environmental Quality (Air, Water, Noise)
5.0 Protecting Reserves
  5.1 Fire Management
  5.2 Weed Control
  5.3 Plant Disease Management
  5.4 Exotic Animal Control
  5.5 Soil Conservation
  5.6 Land Rehabilitation
  5.7 Dangerous Goods and Agricultural Chemicals
  5.8 Spills and Emergencies
6.0 Visitor Services and Infrastructure
  6.1 Provision of Visitor Services and Infrastructure
  6.2 Communication
  6.3 Roads and Vehicular Tracks
  6.4 Road Maintenance, Closure and Barriers
  6.5 Non-vehicular Tracks
  6.6 Air Access
  6.7 Built Structures
  6.8 Day-use Areas and Campsites
  6.9 Shore-based and Aquatic Infrastructure
  6.10 Drinking Water Supply
  6.11 Waste Management
  6.12 Sanitary Systems
7.0 Recreational Codes of Conduct
Activity Assessment

Activity proposals need to be assessed so that reserve values and the potential impacts of a proposed activity are systematically considered. This section contains general prescriptions for the assessment of activities. Where the assessment of an activity requires the consideration of a specific value, threat or standard, then this is referred to in the relevant section of the Code. See Section 4 (Looking After Reserve Values), Section 5 (Protecting Reserves) and Section 6 (Visitor Services and Infrastructure) for specific prescriptions.

GENERAL PRINCIPLES
The approval processes used to reach a decision about new reserve activities vary according to the nature and size of the activity proposed.

It is recognised that an assessment of proposed developments and activities provides a basis for managing and minimising their potential impacts and risks. This applies equally to both internal proposals and third party proposals. Figure 1 (in Section 8) provides a summary of legislation and State policies relevant to the assessment and approval of reserve activities. Also see Section 8 (Approval Processes and Statutory Powers) and Section 9 (Assessing Third Party Minor Activities).

The administrative arrangements that are employed by a reserve management body for assessing the environmental impacts of an activity should include the following key elements:

- standardised and repeatable procedures based on principles of good practice;
- transparent, consultative processes which include a range of stakeholders relevant to the circumstances;
- a level of assessment that is appropriate for the proposed activity, including environmental risk;
- balanced, credible information;
- consideration of cumulative effects;
- decisions and actions that are issues-focused;
- consideration of alternatives;
- adequate documentation of decisions and actions;
- monitoring of compliance and effects; and
- accountability in decision-making.

BASIC APPROACH
All statutory requirements will be met in the approval of activities in reserves. Proposed activities (both internal and third party activities) will be assessed in order to minimise or reduce the potential for impacts of an activity on reserve values.

The level of assessment will be appropriate to the activity and its potential for affecting reserve values.

Where documented decision support systems or procedures are not available or do not provide adequate information for identifying values and their significance, or clear direction for the particular activity or circumstance, then specialist advice should be sought. The recommendations and input from specialists should be incorporated, where appropriate, into an activity proposal.

The assessment process will need to consider, where relevant, whether reservation levels for CAR values could be affected in the regional context.

The activity assessment process should take account of the cumulative effect of developments, uses and proposals on reserve values and visitor experience.

When considering a proposal and before a decision is made, other available options should be identified. Where there is no acceptable option, the activity should not proceed.

Decisions about reserve activities should be recorded.
Table 1 should be used to prioritise a management response where there is conflict in management for multiple values.

<table>
<thead>
<tr>
<th>1</th>
<th>Identify and describe the nature of the conflict between the maintenance of values.</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>Identify and fill important gaps in knowledge of the values affected as far as practicable.</td>
</tr>
<tr>
<td>3</td>
<td>Consider alternative approaches to management that avoid or minimise the effect on values.</td>
</tr>
<tr>
<td>4</td>
<td>Identify how irreversible alternative management approaches are. Take into account the potential for cumulative impacts.</td>
</tr>
<tr>
<td>5</td>
<td>Identify the relative importance of the conflict for the maintenance of each of the associated values.</td>
</tr>
<tr>
<td>6</td>
<td>Determine the significance of the value before making a final decision. Internationally significant values are generally rated higher than locally significant values but this needs to be balanced against local abundance and national significance.</td>
</tr>
<tr>
<td>7</td>
<td>Give priority to the most significant value, taking into account the cumulative effects of an activity.</td>
</tr>
<tr>
<td>8</td>
<td>Implement the most significant guidelines, procedure or plan and monitor as required.</td>
</tr>
<tr>
<td>9</td>
<td>If necessary, halt or modify the guidelines, procedure or plan on the basis of the results of monitoring.</td>
</tr>
</tbody>
</table>

Table 1

Procedure for prioritising management where a proposed activity could cause conflict in management for multiple values

**Policies and procedures for consultation will be used, where they exist. See Section 4.5 (Cultural Values), 4.6 (Social Values) and Key Sources for more information on consultation.**

In general, consultation should take place where:

- the proposed activity has not been approved via a planning process, such as a management plan or other approved planning or policy document involving notification and public comment; and
- the proposed activity is likely to be controversial, eg. is likely to cause a marked change in the present or future use of an area by the public; or it is required under legislation or agency policy.
Looking After Reserve Values

GENERAL PRINCIPLES

Three main types of values are commonly assigned to reserves. These are: natural values; cultural values comprising Aboriginal, historic and social values; and recreational values.

Natural values incorporate a spectrum of values, ranging from existence value at one end through to socially-based values at the other (Australian Natural Heritage Charter). They include geological, geomorphological and soil sites or features; plant species and assemblages; plant and animal habitat; populations of animal species; wilderness; hydrological systems; wild rivers and scenery.

Cultural values include representations of the skills, arts, perceptions and material culture of Aboriginal people and other Australian cultural groups which contribute to the Tasmanian historic period.

Cultural values also include contemporary social values such as the ‘significance’ that members of a local community assign to a place. The use of a place by non-Aboriginal people, which extends over a long period of time, can be considered a contemporary social value.

Recreational values are also recognised and are often the major reason for a reserve’s popularity. They can be the cause of many impacts, issues and conflicts. They may also be considered to be contemporary social values if they have been practiced at a location for a long time.

Strategic planning for the management of natural, cultural and recreational values should initially be carried out at a regional level but within State priorities.

Consultation with people interested in a reserve’s values is fundamental to good planning, decision-making and service delivery and includes the effective involvement of Tasmanian Aboriginal people and other Australian cultural groups.

Aiming for good or best practice benchmarks when conducting reserve management activities is essential for the effective and long-term protection of natural and cultural values.

Reliable information about natural, cultural and recreational values and visitor behaviour is required in order to manage reserves effectively. This is especially necessary where a new activity is proposed, so that the values are not inadvertently damaged or their significance diminished.

To adequately conserve a place or value, especially when an activity is proposed, it is necessary to understand the significance of the site or value.

Reserve managers need to be aware of incremental development or use and the impact it may have on reserve values and visitor experience.

The significance of values is important for prioritising a management response where there is conflict in management for multiple values. (See Table 1, Section 3 Activity Assessment).

Monitoring activities that are likely to impact on values ensures that the benchmarks for good or best practice reserve management techniques are being evaluated, so that management techniques can be improved as required.

Research is essential for monitoring the condition of values, for identifying threats and improving reserve management techniques.

Sharing information with, and training, field-based staff is essential for improving their skills in recognition, protection and appropriate management of values.

Interpretation can increase public awareness of issues and be used to protect values and promote their conservation.

BASIC APPROACH

Reserves and their values will be managed in accordance with this Code, existing legislation, strategies, systems, management, operational or business plans, where they have been developed to manage natural, cultural and recreational values.

Where plans, systems and strategies do not exist, then relevant sources of information, including specialist advice, should be sought regarding a reserve’s values and their appropriate management.
Management policies and operational guidelines should be regularly updated in accordance with national and international standards and practices and latest management planning systems and information.

Natural and cultural values and sites in a reserve should be surveyed, identified, recorded and assessed for significance to provide the best possible information for the activity assessment process.

Australian cultural groups should be considered in all stages of reserve management and be consulted and involved, where practical, in the management of values.

Tasmania’s Aboriginal people are recognised as having a special relationship with all facets of their heritage and the land. Their involvement in reserve management processes will be negotiated in accordance with established protocol.

See Section 4.5 (Cultural Values) for information on established protocol.

Interpretation of natural and cultural values should be considered where this helps to protect values and not threaten them.

A planning process should be implemented to identify potential future impacts and conflicts, and to develop a strategic and effective response to issues of management significance.

Where an activity is having an impact or is causing a conflict, then an appropriate management response that mitigates or avoids the impact or conflict should be implemented.

An activity should be monitored where it is known to have, or is suspected to have, an impact on a reserve’s values.

Monitoring should be undertaken where a proposed activity is likely to have:

- a significant impact on a site or value of conservation or cultural significance;
- an impact beyond the immediate area of the activity;
- a cumulative effect over many years or when considered in conjunction with other activities;
- and/or
- where the effect on reserve values is unknown and is likely to be substantial.

Monitoring should:

- aim to measure the impact of activities on values and the effectiveness of programs to protect significant sites and values;
- be undertaken as an integrated program developed in conjunction with specialists using established policy and procedures where they exist;
- contribute directly to management actions to prevent further impacts on reserve values.

Monitoring of an activity or area should be prioritised in accordance with available resources, to include those areas most at risk of significant impacts.

### 4.1 Geodiversity

**GENERAL PRINCIPLES**

The conservation of geodiversity will be achieved primarily through the protection and maintenance of geological (bedrock), geomorphological (landform) and pedological (soil) features, systems and natural ecosystem processes.

The objectives of geodiversity conservation are to:

- conserve and maintain geodiversity;
- maintain natural rates and magnitudes of change in geoprocesses;
- protect and maintain sites of geoconservation significance;
- minimise harmful impacts on sites of geoconservation significance;
- interpret geodiversity to reserve visitors;
- contribute to maintaining biodiversity and ecological processes that depend upon geodiversity.

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**Geodiversity** is the natural range or diversity of geological (bedrock), geomorphological (landform) and pedological (soil) features, systems and processes. Geodiversity includes evidence for the history of the earth (evidence of past life, ecosystems and environments) and a range of processes (biological, hydrological and atmospheric) currently acting on rocks, landforms and soils.
Geoconservation is the identification and conservation of geodiversity for its intrinsic, ecological and heritage values (Australian Natural Heritage Charter).

Under Section 4 of the Forestry Act 1920, forest produce is defined as including sand, gravel, clay, loam and stone.

Indicative Sensitivity Rating: Sites listed in the Tasmanian Geoconservation Database are classified according to an indicative sensitivity scale. The scale reflects the potential for geoconservation values to be degraded based on differing intensities and patterns of disturbance. The scale ranges from 1 (highly sensitive) to 10 (robust).

Geodiversity features and systems vary in their sensitivity to disturbance; however, all aspects of geodiversity are sensitive to threatening processes at some level.

Natural processes are important to the integrity of many landforms and soils and must be considered in determining management requirements for geodiversity.


A permit is required to take geological or soil samples on all land managed under the National Parks and Reserves Management Act 2002 and land reserved under the Crown Lands Act 1976.

In forest reserves managed under the Forestry Act 1920, written permission is required to take geological or soil samples. Geological or soil samples are considered to be forest produce.

See Section 9.6 (Scientific Research) for more information on the issue of authorities.

Information sources include:
- web sites for reference material;
- the Tasmanian Geoconservation Database to determine if the site has been assessed;
- reserve management plans, scientific reports, surveys and manuals;
- Forestry Commission 1990, Geomorphology Manual;
- Eberhard, R. 1997, Draft Cave Classification System for Tasmania;
- Thorpe, V. 2003, Community Coastcare Handbook: Caring for the Coast in Tasmania;
- WCPA Working Group on Cave and Karst Management 1997, Guidelines for Cave and Karst Protection IUCN;
- local information and field reconnaissance;
- advice from specialists.

BASIC APPROACH

Geodiversity values will be managed in situ, unless there are compelling conservation reasons for doing otherwise.

Relevant information on sites or areas of significance, or potential significance, should be recorded when planning for an activity.

The Tasmanian Geoconservation Database and other relevant information sources should be consulted to determine the conservation significance of recorded sites and to see if an Indicative Sensitivity Rating has been applied.

Where an activity is approved at a site of geoconservation significance, measures should be implemented to avoid or minimise adverse impacts to geological, landform and soil features and processes. Specialist advice should be sought to determine these measures.


Threatening processes or activities should be addressed where they are likely to adversely affect:
- a site of geoconservation significance; or
- a natural process relevant to the integrity of a site of geoconservation significance.

Where rehabilitation activities are undertaken, these should, as far as practicable, restore relevant natural features and processes.

See Section 5.6 (Land Rehabilitation) for information on rehabilitation.
See Section 3 (Activity Assessment) and the introduction to Section 4 (Looking After Reserve Values) for information on assessing activities.

**INFORMATION FOR ACTIVITY ASSESSMENT**

Where field assessment is required, collect the following information:

- bedrock, soil type and exposure
- geomorphology and geomorphological processes operating
- trends in the condition of the site and the extent of disturbance including the extent of vegetation cover (e.g., active erosion, reduction in vegetation cover)
- current use of the site
- other threats to the identified values
- likely impact of the proposed activity on the values
- condition and effectiveness of existing mitigating measures (e.g., formed tracks, barriers, educational materials, signs etc)

Retention of parts or all of artificial exposures (e.g., road cuttings, quarries) will be considered where this can contribute to maintaining the values of sites of geoconservation significance.

Sites of geoconservation significance that are publicised or promoted to the public should be managed to protect the values from threats arising from increased visitation.

Sites of geoconservation significance will not be publicised or promoted where this could result in damage to site values. Consideration should be given to controlling public access where unrestricted access is likely to result in unacceptable impacts on site values.

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Peat mounds such as this occur on a number of restricted lowland plains in southwest Tasmania. Relevant information sources should be consulted to determine the conservation significance of recorded sites.

Louisa Plains, Southwest National Park.
Coastal protection works and reclamation
Modification of coastal landforms through reclamation, construction of groynes and breakwaters, stabilisation of naturally mobile dunes, and similar measures involving impacts to landforms and landform processes, should be avoided. These measures should only be considered where they are consistent with the requirements of the Tasmanian State Coastal Policy and there is a substantial threat to infrastructure.

Breaching of spits should only occur if there is a significant threat to public safety, public health, public infrastructure or risk of severe damage to other structures, and only after full consideration is given to possible implications for natural and cultural values and natural processes. Existing procedures, where developed, will be adhered to.

Development of infrastructure should only occur where the risk is demonstrated to be low, or the structures have the capacity to be moved when threatened by inundation.

Coastal protection works should only occur for the protection of existing, important structures and infrastructure following the production of an approved environmental impact assessment which examines the impacts and effectiveness of the proposed design, construction and monitoring.

The use of marram grass as an erosion control measure will be in accordance with Section 5.6 (Land Rehabilitation).

Karst management – surface activities
The karst systems context will be considered in assessing and managing activities in karstlands. This means recognising the potential for a high level of connectivity between surface and underground features and processes, and taking account of this in all aspects of management.

Specialist input will be obtained and other relevant sources will be consulted as part of the assessment process for activities that could affect a karst landform or karst system.

Karst landforms (surface and underground), drainage divides and subterranean watercourses should be documented in assessing activities with potential to have an impact on karst systems. This information should be taken into account in assessing the activity and avoiding or mitigating impacts if the activity proceeds.

An investigation should be initiated where currently available sources are inadequate to assess the impact of an activity in a karstland. The investigation may include mapping landforms and caves, water tracing, discharge measurements and other activities as appropriate.

Downstream impacts will be considered in assessing activities with potential to affect water flows or water quality in a karst system (the activity itself may not be on karst). Relevant sources should be consulted to determine whether a karst system occurs downstream of the activity.

Opportunities to develop a collaborative approach to management with neighbours should be identified and pursued where karst systems extend across boundaries between reserves and adjacent tenures. However, it is not the responsibility of reserve managers to control access to caves in private land.

See Section 5.5 (Soil Conservation), 5.7 (Dangerous Goods and Agricultural Chemicals) and 6.12 (Sanitary Systems) where a relevant activity is proposed in a karstland.

Karst management – cave-based activities
Classification and management of karst caves will be in accordance with the Tasmanian Cave Classification System.

Measures such as signs, stringlines and markers to delineate routes should be installed where this can help reduce the impact of cave visitors. A standardised system should be adopted for defining routes.

Protective matting, boot washing stations and other measures should be installed where this can help reduce the impact of cave visitors.
Significant new cave discoveries should be assessed, as a matter of priority, and measures implemented to ensure that future visitation does not cause unacceptable impacts on the cave. The role of caving clubs in promoting awareness of minimal impact caving practices, and in documenting aspects of caves relevant to management, should be recognised. Opportunities to collaborate with caving clubs in cave management activities should be identified and pursued where practicable.

Minimal impact caving practices and site-specific caving protocols should be promoted through notesheets or signs at Wild Caves subject to significant recreational pressure.

Monitoring should be carried out to assess levels and impacts of visitation to Show Caves and Wild Caves subject to significant recreational pressure.

Cave restoration and cave-cleaning programs should be initiated where this can mitigate damage caused by visitation or other activities.

Caves will be designated as Restricted Access Caves where unrestricted public access is likely to result in unacceptable impacts on the cave environment or otherwise conflicts with management objectives for the site.

Restricted Access Caves and other sensitive caves should be gated, where this is practicable and necessary to control access. Cave gates will be designed and constructed to avoid significant impacts on the cave microclimate, and to ensure that the cave ecosystem is not adversely affected. Alternative measures to control access will be considered if gate construction is likely to create unacceptable impacts on karst landforms or ecosystems.

Protocols for access to caves should be based on an assessment of environmentally sustainable visitation levels, and the skills and experience required of visitors to ensure that unacceptable impacts are avoided.

Visitors to caves will be required to adhere to minimal impact caving practices in accordance with relevant caving codes and any site-specific guidelines prepared by the reserve management body.

As far as practicable, cave-based infrastructure should be designed to provide for installation, maintenance and possible later removal, without permanently damaging the cave.

Materials installed in caves should be non-polluting and stable in the environment. The condition of cave-based infrastructure should be periodically assessed, and replaced or upgraded if necessary.

Show Caves should be subject to environmental monitoring systems to address lampenflora, the cave microclimate, lint and other parameters as appropriate.

Suitability based on environmental parameters, will be a principal criterion in assessing caves proposed as sites for public presentation.

Management plans and/ or site plans should be developed for karst sites developed for public presentation (eg. Show Caves) or subject to significant recreational pressure. An integrated approach will be adopted in planning lighting, interpretation, tour structure, monitoring systems and surface infrastructure at Show Caves.

Where access is requested to caves with Aboriginal values, the Aboriginal community will be consulted and access designated.

See Section 4.5 (Cultural Values) for information on Aboriginal community consultation.
4.2 Flora and Fauna Values

GENERAL PRINCIPLES
The conservation of flora and fauna values is best achieved by the protection of indigenous species and their habitat, and the maintenance of natural ecosystem processes.

Protecting existing indigenous vegetation is the most efficient way of conserving flora and fauna values.

Species, communities and ecosystems vary in their sensitivity to disturbance.

Natural processes are important to the integrity of communities and the survival of individual species. Direct intervention may be required to ensure the survival of rare and threatened species and communities.

The objectives of native flora and fauna conservation are to:
- retain the natural diversity of native species, communities and ecosystems;
- maintain the natural exchange of genes and the functioning of evolutionary processes within native populations and species;
- prevent or minimise harmful impacts on biodiversity;
- restore or reinstate conservation significance where appropriate;
- promote and interpret biodiversity and the conservation of threatened native species, communities and ecosystems to reserve visitors;
- contribute to maintaining other natural values that depend on biodiversity.


An authority (permit) is required to take any protected wildlife, or their products, on the schedules of the Nature Conservation Act 2002 (‘specially protected’, ‘protected’ or ‘partly protected’ wildlife). Similarly, a permit is required to take any threatened species (plants and animals) listed on the schedules of the Threatened Species Protection Act 1995. A permit is required to take fish under the Inland Fisheries Act 1995.

An authority under the National Parks and Reserves Land Regulations 1999 is required to take plants and animals on reserved land.

An authority is required to take or remove plants or vegetation from land reserved under the Crown Lands Act 1976.

In forest reserves managed under the Forestry Act 1920, permission of the reserve manager to conduct the activity is also required.

See Section 9.6 (Scientific Research) for more information on the issue of authorities.

Information sources include:
- web sites for reference material;
- GIS information;
- decision support systems such as the Threatened Fauna Adviser and Cortex (available through GTSpot);
- support systems such as Habitat Assessment for Rare and Threatened Species (HARTS is available from DPIWE, Threatened Species Unit);
- reserve management plans, scientific reports, surveys, and manuals;
- Forest Practices Board forest botany and threatened fauna manuals;
- land management, threat abatement or species recovery plans, listing statements or interim protection orders;
- Protecting Natural Heritage – using the Australian Natural Heritage Charter;
Tasmania's Nature Conservation Strategy;
Threatened Species Strategy for Tasmania;
reports on the Flora of Recommended Areas for Protection and Forest Reserves in Tasmania;
National Estate sites of significance reports;
local information and field reconnaissance;
advice from specialists.

BASIC APPROACH

Relevant information on sites or areas of significance, or potential significance, should be recorded when planning for an activity.

A high priority should be given to managing threatening processes or activities that have, or are likely to have, an impact on:
- species listed under the Threatened Species Protection Act 1995;
- species or ecological communities listed under the Environment Protection and Biodiversity Conservation Act 1999;
- threatened forest communities identified in the RFA as warranting protection;
- non-forest communities identified in the Vegetation Management Strategy for Tasmania;
- locally or regionally significant species in the area.

Don’t assume that an absence of sites listed in a database means that an activity will not affect a site of significance, as not all sites have been discovered, documented or had their listing formalised.
Contact the appropriate specialist for further information.

Threatened Forest Communities are listed at the Private Forest Reserves Program web site www.pfrp.tas.gov.au/program

Guidelines/Permit Applications are available at www.dpiwe.tas.gov.au > parks and wildlife > Nature of Tasmania > Plants of Tasmania

A high priority should be given to managing threatening processes or activities that impact or are likely to impact on non-forest communities identified in the Vegetation Management Strategy for Tasmania.
Poa grassland, Maria Island National Park.
Conservation priority is determined by the criteria defined in the Threatened Species Strategy for Tasmania (2000) for prioritising protection and recovery action for threatened species. These criteria are:
- national priorities;
- State threat classification in the schedules of the Threatened Species Protection Act 1995;
- endemism, local or regional significance;
- taxonomic distinctiveness;
- keystone role;
- cultural and community significance;
- likelihood of recovery with minimum action;
- reservation status of the species.

Exceptional circumstances would include the transference of an endangered species as part of a recovery program.

The assessment process will need to consider, where relevant, whether reservation levels for CAR values could be affected in the regional context.

Where a site of conservation significance is identified, and an activity is approved at that site, measures should be taken to avoid or minimise adverse impacts on features of biodiversity, species or communities with a conservation priority and the ecological processes that support them. Specialist advice should be sought to determine these measures.

Threatening processes or activities should be addressed where they are likely to:
- place a species at risk of a significant, unnatural reduction of individuals in a population;
- reduce the integrity of communities or ecosystems to a point where natural processes are threatened;
- adversely affect an identifiable feature of biodiversity (see General Principles in this section).

The response should aim firstly to prevent the threatening process or activity from having an impact on the value or, where this can not practically occur, aim to reduce the effect of the threat.

Restoration of native vegetation and habitat should be undertaken where it will promote biodiversity conservation objectives.

See Section 5.2 (Weed Control) and 5.6 (Land Rehabilitation) for information on restoring native vegetation and habitat.

Movement of indigenous Tasmanian fauna species

Indigenous Tasmanian fauna species (including animals raised in captivity by carers) will not be moved to areas outside their normal range of distribution in Tasmania. Individual animals should not be transferred between populations, except under exceptional circumstances.

Only under exceptional circumstances, and where specified in a Species Recovery Plan, will indigenous Tasmanian fauna species be deliberately transferred between reserves or islands, or introduced onto them from other sources.

In all cases, an environmental impact statement will be prepared before the species is released into the new environment.

Removal of dangerous trees

Trees that have a significant probability of falling or dropping limbs in areas commonly used by reserve visitors (e.g., frequently used or popular walkways and campsites) should be assessed for risk and then appropriate measures taken.

Tree surgery should be considered where it is likely that a tree may respond positively.

A key reference for assessing the risk from retained trees in forest reserves is the Forest Practices Board’s Administrative Instruction: Procedure for assessing the risk to public safety where trees are retained under the forest practices system.

In reserves other than forest reserves:
- assessing the risk from trees retained in areas commonly used by visitors, should follow the Parks and Wildlife Service Public Risk Management Policy; and
- specialist advice will be obtained before removing trees with high conservation or social value, or before removing trees from a site of high conservation value.

See Section 8.5.3 (Tree Removal or Timber Harvesting).
Where field assessment is required, collect the following information:

- the plant communities present;
- whether threatened flora or fauna species or threatened ecological communities are known or likely to occur at the site;
- the presence of migratory species or their habitat;
- other significant flora or fauna values known or likely to occur at the proposed site or nearby;
- trends in the condition of the site (e.g., the presence of weeds, Phytophthora cinnamomi, tracks, campsites, fire and grazing history, removal of standing timber, reduction of vegetation cover, active erosion);
- the current use of the site;
- other threats to the identified values;
- condition and effectiveness of existing mitigating measures (e.g., barriers, educational materials, wash-down stations).

### 4.3 Landscape

#### General Principles

The concept and meaning of landscape is generally influenced by the viewer’s past experiences and attitudes. Many landscapes have more than one aspect of heritage value, with both cultural and natural heritage values being present.

Cultural values in landscapes may have no visible human impacts or constructions but can include traditions, stories, dance, music, spirituality or other cultural values that are derived from intangible, invisible elements including the landscape itself.

Some landscapes are strongly associated with aspects of history even though there may be no detectable trace left and the landscape is essentially in a ‘natural’ condition.

Broadly, the objectives of landscape management are to:

- protect the scenic, aesthetic, natural and cultural heritage qualities of landscape;
- contribute to maintaining the sense of place of communities;
- maintain the diversity of natural and cultural heritage landscapes;
- restore natural and cultural heritage landscapes that have been degraded by inappropriate developments.

Scenery, which is the most familiar concept of landscape, often involves an emotional response from the viewer which depends on several things including:

- visual character or appearance of the landscape;
- degree of scenic variety;
- visual effect of introduced changes;
- the viewer’s existing attitude and feelings about the place.

The Tasmanian State Coastal Policy provides guidance in planning for developments in coastal areas.

Landscapes across Tasmania vary in their scenic importance and viewer sensitivity to the landscape. This can be used to guide the extent to which activities have an impact on the landscape.

Information sources include:

- Protecting Natural Heritage – Using the Australian Natural Heritage Charter;
- Planning Guidelines: Urban Skylines and Hill Faces;
- A Manual for Forest Landscape Management;
- map-based information systems.
As a minimum, for *visually intrusive activity* proposals, known viewpoints should be identified and marked on the appropriate 1:25000 map sheet.

A statement should be made about the viewpoint in terms of *viewer sensitivity* (i.e. visitor numbers and composition, eg. main tourist route vs minor unsealed road), distance from viewpoints to proposed site and the character of the scenery (eg. landform, vegetation, waterform, land use).

**BASIC APPROACH**

Activities should be planned and implemented in ways that will not detract significantly from landscape values.

Those parts of the reserve's landscape that are the most sensitive to public viewing should be identified so that the greatest effort in visual management can be given to the highest priority areas.

Aboriginal landscapes should be identified in conjunction with the Aboriginal community.

Specialist advice should be sought on appropriate consultation protocols.

Historic landscapes should be identified from documented information, historic photographs and consultation with the local community where appropriate.

Specialist advice should be obtained.

An inventory of the most visually sensitive areas in a reserve should be established based on the scenic quality of the landscape, the visibility and distance from public viewpoints and the relative sensitivity of the viewpoints.

Cultural landscapes should be categorised and recorded in accordance with existing procedure for places of cultural significance.

See Section 4.5 (Cultural Values) for more information on procedures for recording places of cultural significance.

Protection of cultural heritage landscape values may require cleared areas and exotic species to be maintained, subject to appropriate monitoring and control.

Tourism operators, local communities and regular visitors should be consulted where a proposed development is likely to have an impact on an identified significant view. Contact with the Aboriginal community (especially local communities) should follow established protocol.

Assessments of the significance of Aboriginal landscapes will be done in conjunction with the Aboriginal community.

Any alterations or changes to the cultural heritage landscape should be documented in accordance with Section 4.5 (Cultural Values).
Particular care should be taken to protect landscape values at locations that include areas of high priority or significance. These can:
- be identified as scenically important views;
- incorporate views that are likely to be of significance to the public;
- include areas of summit or skyline;
- be visible from coastal waters, roads, walking tracks, lookouts, and other vantage points; or
- be culturally significant.

Activities that might affect scenic landscape values should aim to blend in with or complement the character of the existing environment (natural or cultural) through use of appropriate siting, design, materials, colour and vegetation.

See Section 6.7 (Built Structures) for more information on design aspects.

Activities with the potential to affect landscape values visible from urban or rural population centres will be assessed for visual sensitivity.

Where feasible and subject to consideration of cultural heritage significance, structures that detract from landscape values should be removed, replaced or otherwise modified to reduce impacts on landscape values.

Restoration of degraded natural landscapes will take account of their possible cultural significance.

See Section 4.5 (Cultural Values) and 4.6 (Social Values) for information on determining the cultural significance of places and assessing social values.

### 4.4 Wilderness and Wild Rivers

#### GENERAL PRINCIPLES

The objectives for protecting wilderness and wild rivers are to:
- minimise the effects on wilderness quality of disturbance from human activities within high quality wilderness areas;
- restore or enhance wilderness quality in areas within, or contiguous with, high quality wilderness areas, where the wilderness quality has been degraded by past activities;
- maintain or enhance the integrity of identified wild rivers.

Wilderness values are best protected by minimising human disturbance in high quality wilderness areas, and by maintaining the remoteness of wilderness areas from developments and access. The term ‘wilderness’ does not imply that the landscape has been devoid of occupation and use by Aboriginal people.

Wild river values are best protected by:
- maintaining the natural condition of a wild river and associated parts of its catchment;
- minimising disturbance to the hydrological, geomorphological and biological processes of the defined rivers.

Information sources include:
- web sites;
- GIS information;
- map-based information systems such as RFA maps available through the GTSpot database;
- Conservation Guidelines for the Management of Wild River Values;
- relevant reserve management plans, RFA reports;
Looking After Reserve Values

Wild river – a channel, channel network, or a connected network of waterbodies, of natural origin and exhibiting overland flow (which can be perennial, intermittent or episodic) in which:

- the biological,
- hydrological and
- geomorphological
- processes associated with river flow, and
- the biological,
- hydrological and
- geomorphological
- processes in those parts of the catchment with which the river is intimately linked, have not been significantly altered since European settlement (Conservation Guidelines for the Management of Wild River Values).

The parties to the RFA recognised that, subject to clauses 80 and 82, exploration could take place in defined CAR reserves containing wilderness areas and that measures will be taken to minimise the effects of mineral exploration activities.

**BASIC APPROACH**

Activities in areas of high quality wilderness that could detract from the wilderness quality should be avoided.

Activities in high quality wilderness should be carried out in a manner consistent with the maintenance or enhancement of wilderness quality.

Where an activity with the potential to detract from wilderness quality is proposed in or near a high quality wilderness area, consideration will be given to confining the activity to areas of lower wilderness quality outside or toward the periphery of the high quality wilderness area.

New or enhanced access routes or tracks, especially where high quality wilderness is compromised, should be assessed and action should be taken in accordance with Section 6.4 (Road Maintenance) of the Code to minimise erosion.

Measures to rehabilitate disturbance resulting from past activities will be considered where the disturbance detracts from wilderness quality in a high quality wilderness area or an area of potential high quality wilderness.

Redundant and/or unauthorised built structures in a high quality wilderness area should be removed, subject to consideration of cultural heritage significance.

Activities that could affect the natural condition of a wild river or its catchment should be located outside the wild river catchment, where possible. Where an activity that could affect the natural condition of a wild river or its catchment is unavoidable, the activity should be carried out in a manner that is, as far as is practicable, consistent with the maintenance or enhancement of wild river values.

Wilderness areas that are publicised or promoted to the public should be managed to protect values from threats arising from increased visitation.
4.5 Cultural Values

GENERAL PRINCIPLES
Cultural values include Aboriginal values, historic heritage values and social values.

Social values are, however, considered separately in Section 4.6 (Social Values).


Cultural heritage places are:
- able to inform us about past ways of life;
- often aesthetically pleasing and interesting.

However, they are:
- often fragile and easily damaged or disturbed by activities and new developments;
- a non-renewable resource;
- often difficult to identify.

The main objective of managing cultural values in reserves is to minimise or prevent adverse effects of natural and human actions and, by researching the human history, to gain a better understanding of the area. This can be achieved through:
- identifying cultural places, their stories and associated issues in order to determine their nature;
- joint partnerships with community sectors so that they can be involved in the management of cultural values that are important to them;
- implementing policy and undertaking planning in order to assign available resources effectively;
- recording conservation activities and cultural heritage sites at the standard specified by The Burra Charter, and maintaining a permanent record of them;
- determining conservation significance and management requirements;
- undertaking protective projects which identify natural and human threats to cultural places or values and aim to address these threats through conservation works and/or maintenance;
- identifying key places that are appropriate for promotion as leading attractions. These places are conserved and actively managed and the public are directed to them;
- reusing or adapting the use of Aboriginal and historic heritage resources and places where appropriate;
- increasing cultural awareness by interpreting cultural values to reserve visitors and improving community understanding of cultural heritage and its management;
- improving the knowledge and skills base in Aboriginal and historic heritage management.

Information sources include:
- databases with limited access protocol such as those available on CONSERVE (through Forestry Tasmania) and the Cultural Heritage Information Database and the Tasmanian Heritage Register;
- relevant reserve management plans, reports, survey results and procedures manuals;
- predictive models to aid in the identification of sites and values;
- Australian charters and best practice documents for guiding the management of cultural values. See the list in Basic Approach, below.

An assessment of the heritage value of a place for indigenous people can only be provided by the relevant indigenous people.

BASIC APPROACH
Planning for activities in reserves will involve an assessment of potential impacts on cultural values.

See Section 8 (Approval Processes and Statutory Powers) and Section 3 (Activity Assessment) for further information on the assessment and approval of activities.

Aboriginal or historic heritage values include objects and features made, used or occupied by people. Such features may include middens, artefacts, rock shelters, hut depressions, certain plant and animal resources, homes, huts, factories, industrial complexes, outlying features such as sheds, non-shelter structures, fences, tracks, portable and non-fixed heritage items, graves, modified landforms, sub-surface artefacts, shipwrecks and remains.

Certain places and landscapes may also have cultural value. They can encompass made or modified places and objects as well as natural sites or features with natural values. Some special places are valued because they are locations where communities meet socially or undertake community-building activities together. See Section 4.6 (Social Values).

Cultural Heritage Information Database consists of the Tasmanian Aboriginal Site Index and the Tasmanian Historic Places Inventory.

The Burra Charter provides detailed guidance for assessing the significance of cultural heritage places. This can be found at www.heritage.gov.au > key resources.
Relevant information on sites or areas of cultural significance, or potential significance, should be recorded when planning for an activity.

Activities that affect Aboriginal and/or historic heritage places should be documented and permanently recorded where relevant procedures exist. Specialist advice should be sought.

Where sensitive areas or significant values are identified and there is potential for a proposed activity to impact on them, surveys will be completed unless the survey is likely to have an adverse impact on the values. The activity proposal will be modified to reduce the impacts and it will be reassessed prior to a decision being made about the activity.

Where it is identified that an activity is likely to impact on cultural values, the community and relevant organisations will be given an opportunity to provide advice where appropriate.

In particular, the Aboriginal community will have an opportunity to provide advice if Aboriginal heritage values are likely to be affected.

**INFORMATION FOR ACTIVITY ASSESSMENT**

Where field assessment is required, collect or collate the following information:

- known Aboriginal or historic values in the vicinity of the activity (see description of values in General Principles);
- trends in the condition of the site and the factors causing erosion or damage (eg. climatic impacts, reduction in vegetation cover, other use issues);
- current use of the site;
- social values (See Section 4.6) including local community involvement or established recreational or other uses;
- other threats to the identified values;
- likely impact of the proposed activity on the cultural values;
- condition and effectiveness of existing mitigating measures (eg. effectiveness of guttering, culverts, midden stabilisation measures, formed tracks, barriers, educational materials, signs);
- presence of remnant exotic habitat (specialist advice may be required) and related issues in the vicinity of proposed activities.

Specialist advice should be sought on appropriate consultation protocols.

In the absence of policy or specific management documents then the management of cultural values should be guided by the Code and the guidelines and principles of:

- Hague Consulting Limited & Kelly, M. 2000, Cultural Heritage Management (Parks and Protected Areas) Best Practice;
- The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter);

Newly identified places will be reported in accordance with the National Parks and Reserves Management Act 2002 and the Aboriginal Relics Act 1975 and should be documented and permanently recorded via the relevant procedure. Specialist advice should be sought.

A high priority will be given to managing threatening processes or activities that will or have a high potential to diminish the significance of a cultural heritage site.

Features or objects from past use of an area should only be removed or rehabilitated if their presence has been assessed as creating a negative effect on values in the area or is creating a hazard.

Removal of features or objects should only proceed following specialist advice and authorisation.
See Section 6.7 (Built Structures) for information on supporting documents required for development applications.

Where public access to a cultural heritage site is likely to result in unacceptable impacts on site values, then access should be altered, limited or prevented as appropriate.

Sites of cultural heritage significance will not be publicised or promoted where this could result in damage to site values.

Sites of cultural significance that are publicised or promoted to the public should be managed to protect the values from threats arising from increased visitation.

Minimal impact practices should be promoted to visitors.

Any activity undertaken to protect an Aboriginal site that involves covering, concealing or otherwise interfering directly with an Aboriginal site will require a permit under the Aboriginal Relics Act 1975.

Permits for other activities that are likely to affect an Aboriginal relic as described under the Aboriginal Relics Act 1975 will be obtained where required.

Specialist advice will be sought where there is uncertainty about the implications of the Aboriginal Relics Act 1975 in regard to the definition of Aboriginal relics.

Specialist advice should also be sought when:

- activities are proposed for a place listed in the Tasmanian Historic Places Inventory;
- activities are proposed for a Registered Place or a Place within a Heritage Area as declared under the Historic Cultural Heritage Act 1995;
- a conservation policy or plan is required for a cultural heritage site.

Approval of the Tasmanian Heritage Council will be sought for activities proposed for a place listed in the Tasmanian Historic Places Inventory and for activities proposed for a Registered Place or a Place within a Heritage Area as declared under the Historic Cultural Heritage Act 1995.

A recurrent maintenance plan should be developed in conjunction with specialists for all actively managed cultural heritage sites and structures.

Under Part IV Section 14(1) of the Aboriginal Relics Act 1975 no person, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director (of Parks and Wildlife), shall destroy, damage, deface, conceal, uncover, expose, excavate, or otherwise interfere with a relic ... remove a relic from the place where it is found or abandoned...

The Tasmanian Heritage Council has published significance thresholds for the criteria for entry on the Tasmanian Heritage Register. Information about the Tasmanian Heritage Council can be found at www.tasherdige.wtas.gov.au

Ernie Bond’s homestead, Gordonvale, Southwest National Park.
Looking After Reserve Values

A key place is a site of cultural heritage significance, identified through a strategy, management plan or other planning or policy document as being suitable for interpretation and other visitor facilities.

Aboriginal communities include:
- Tasmanian Aboriginal Land Council
- Tasmanian Aboriginal Centre
- Tasmanian Aboriginal Elders Council

Maintenance should be performed in accordance with a recurrent maintenance plan where it exists. Where a maintenance plan is not available and the rehabilitation or repair of a culturally significant place is required, specialist advice should be sought before proceeding.

Development of key places should focus on enhancement of significant values and, where appropriate, visitor access should be improved and promoted.

Specialist advice should be sought when the conservation, development and promotion of key places is proposed.

4.5.1 Cooperative Management of Aboriginal Values

GENERAL PRINCIPLES

The Tasmanian Aboriginal community has a special relationship with many reserves because of its long association with these areas. Members of the community experience a unity with the land and consider natural and cultural values inseparable.

This special relationship is best maintained by ensuring active participation by the Tasmanian Aboriginal community in the protection, conservation, presentation and cultural use of Aboriginal values in reserves.

The following areas are of particular interest to the Aboriginal community: burial grounds, some caves, traditional animals (hunting), plants (collecting) and minerals (eg. ochre), fire, landscapes, native forests, old (eg. Aboriginal) and new (eg. bushwalking) tracks and the interpretation of Aboriginal culture. This list is not exhaustive as the Aboriginal community views the entire landscape as its heritage.

The rights of the Aboriginal community to take resources for cultural reasons were recognised by the Living Marine Resources Act 1995, which allows Aboriginal people to take marine resources for traditional purposes. The Aboriginal Lands Act 1995 provides for similar hunting and gathering rights over Aboriginal land.

The process of recognising and integrating cooperative management of Aboriginal values with the Aboriginal community is dynamic and subject to change. Strategic planning documents such as reserve management plans and negotiated agreements can be used to clarify management roles.

Clear lines of communication between the reserve management body and organisations representing the various sectors of the Tasmanian Aboriginal community are essential for maintaining Aboriginal community involvement in the protection, conservation and, where appropriate, presentation and cultural use of Aboriginal values in reserves.

Research into Aboriginal cultural knowledge can assist in land management.

It is an objective for reserve management to increase Aboriginal management of Aboriginal values.

BASIC APPROACH

Management for Aboriginal values will be consistent with relevant statutory requirements and the reserve's management plan or other approved planning or policy document (where one exists).

The Tasmanian Wilderness World Heritage Area Management Plan 1999 reflects the results of the most comprehensive collaboration between the Aboriginal community and reserve managers yet undertaken in Tasmania. As such, it should be referred to as a guide to cooperative management arrangements in other reserves. However, these arrangements will need to take into account future policy developments.

The following prescriptions are derived from the Tasmanian Wilderness World Heritage Area Management Plan 1999 and should be used to guide the process of cooperative management in the absence of policy.
Reserve managers should be pro-active in working cooperatively with the Aboriginal community to identify, protect, conserve and present Aboriginal values. State-wide as well as local interests need to be recognised.

Where an agreed set of Aboriginal values has been identified, the Aboriginal community will be consulted and involved in developing and refining existing land management strategies and practices for managing them. Specialist advice should be sought on appropriate consultation protocols. Aboriginal people should be encouraged to participate in joint management arrangements in areas that are significant to them.

4.6 Social Values

GENERAL PRINCIPLES
Social values are sometimes seen as a sub-set of cultural values.

Places of social value include those that:
- provide a spiritual or traditional connection between past and present;
- tie the past affectionately to the present;
- restore a disempowered group's history;
- provide an essential reference point in a community's identity;
- are prominent in daily life;
- have shaped some aspect of community behaviour or attitudes;
- are distinctive;
- are accessible to the public and offer the possibility of repeated use to build up associations and value to the community of users;
- act as a location for community gathering.

Key principles for identifying social or community values can be found in Russell et al. (1998).
See below or Key Sources.

Information sources include:
Coakhes, S. 1999, Consulting with communities: a policy maker's guide to consulting with communities and interest groups;
Johnston, C. 1992, What is Social Value?;
Agency guidelines and strategies for consultation and communication. See Key Sources.

BASIC APPROACH
See Section 3 (Activity Assessment) and Key Sources for further information on community consultation.

The assessment and management of places that are likely to have significant social values should involve the communities who use them, live close by or regularly visit.

Observation, questioning, mapping areas of use, feedback to clarify points and recording oral history can be used to understand social values.

The methods used should be appropriate and acceptable to the community.

Specialist advice should be sought when designing visitor surveys.

The nature and degree of significance should be assessed. This involves:
- determining which people, interest groups or community sectors consider the place important and why;
- assessing the relative value of a place compared to other places valued by the same people, interest group or community sector;
- determining how its significance relates to the fabric of the place.

Strategies and practices may include developing a joint animal, plant and material use policy; the strategies for implementing that policy; the appropriate level of Aboriginal co-management and Aboriginal representation on relevant management committees.

Social value is about collective attachment to places that embody meanings important to a community. These places are usually community owned or publicly accessible or in some other way 'appropriated' into people's daily lives. Such meanings are in addition to other values, such as aspects of history or beauty, and these meanings may not be obvious in the fabric of the place, and may not be apparent to the disinterested observer. (Johnston, 1992)

Social values may need to be assessed where a proposed activity or development may alter the pattern of use by a local community.
The options for conserving the value should be explored.

Specialist advice should be sought where proposed activities are likely to significantly affect social values.

Where they exist, policies, strategies and procedures for consultation should be used.

4.7 Recreational Values

GENERAL PRINCIPLES

The objective of managing recreational opportunities is to maintain a spectrum of opportunities, ranging from those that are more developed and in accessible locations to those that are undeveloped in remote areas, while taking account of other reserve values including wilderness quality.

Recreational activities are often interlinked with the social values of a place. This is particularly so if those activities have a long history and/or provide the means and a venue for community bonding.

BASIC APPROACH

See Section 3 (Activity Assessment) and Key Sources for further information on community consultation.

Opportunities for a range of recreational activities should be provided or maintained where they are consistent with the reserve’s management objectives, and are in accordance with existing strategies and a reserve’s management plan, or other approved planning or policy document.

New recreational opportunities should only be developed where:

- the impacts on natural and cultural values can be either avoided or minimised;
- the experience of other users will not be diminished.

Safe and minimal impact recreational practices should be promoted. See Section 7 (Recreational Codes of Conduct).

Non-compatible uses and recreational activities should be separated.

Visitor activities and infrastructure should be managed to provide a high quality experience for users.

Formal reserves provide for a wide range of recreation pursuits including sightseeing, picnicking, walking, rafting, canoeing, fishing, skiing, caving, climbing, boating, bike riding, horse riding and hunting.
Where values are threatened by a recreational pursuit the following options should be considered:
regulating visitor numbers;
providing alternative sites or opportunities;
educating and informing visitors;
protection measures such as hardening surfaces and installing barriers.

The social value of a recreational activity should be evaluated where it is proposed that it be
regulated or limited.

See Section 4.6 (Social Values) and 6.1 (Provision of Visitor Services and Infrastructure).

4.8 Environmental Quality (Air, Water, Noise)

GENERAL PRINCIPLES
The objective of managing environmental quality is to maintain or restore the natural quality of
air and water and the natural level of noise in the environment.

Environment Protection Policies (EPPs), prepared in accordance with section 96 of the
Environmental Management and Pollution Control Act 1994, are regulatory mechanisms for the
protection of environmental quality in Tasmania. EPPs on Noise and Air Quality (in prep.) aim to
address significant issues and provide a framework for addressing them.

The statutory management objective ‘to preserve the quality of water and protect catchments’
applies to all classes of reserved land under the National Parks and Reserves Management Act

The State Policy on Water Quality Management, prepared under the State Policies and Projects
Act 1993, aims to achieve the sustainable management of Tasmania’s surface water and
ground-waters by protecting or enhancing their qualities while allowing for sustainable
development in accordance with the objectives of the Resource Management and Planning
System. It requires the protection of Protected Environmental Values (PEVs) as identified in
consultation with the community.

PEVs are the current uses and values for a waterbody. The categories of PEVs listed in the State
policy are:
- protection of aquatic ecosystems
- recreational water quality and aesthetics
- raw water for drinking water supply
- agricultural water uses
- industrial water supply.

Water quality objectives (WQOs) are the most stringent set of water quality guidelines which need
to be met to achieve all of the PEVs identified for a waterbody.

WQOs comprise set levels of key indicators and are used to measure the success of strategies
and actions to manage pollution from point and diffuse sources.

See Section 5.7 (Dangerous Goods and Agricultural Chemicals) for information on reserve
managers’ obligations to protect the environment (including water resources and air quality)
under the Environmental Management and Pollution Control Act 1994.

BASIC APPROACH
Unless there is good reason to make an exception, all reserves will have Protected
Environmental Values assigned to them.

The existing quality of the air, water and noise environment should be evaluated when an activity
or development is proposed that may affect these aspects. A risk management plan should be
developed where risks to the environment are considered to be significant.

Water Information Web Site
Information on water resources, state policies, water management, use, protection and water facts
can be accessed at www.dpiwe.tas.gov.au then visit >water.

Protected Environmental Values
A. Protection of Aquatic Ecosystems
- pristine or nearly pristine ecosystems for those watercourses with their
  headwaters in the reserve
- modified (not pristine) ecosystems from which edible fish, crustacea and
  shellfish are harvested for all other waters within the reserve

B. Recreational Water Quality and Aesthetics
- primary contact
- secondary contact
- aesthetics

Where the water has other uses then one or more of the following PEVs will also apply:
C. Raw Water for Drinking Water Supply
- subject to coarse screening plus disinfection (eg. for
town water offtake)
D. Agricultural Water Uses
- stock watering
E. Industrial Water Supply
Monitoring on the Overland Track to assess impacts of human activity and infrastructure on water quality.

Acoustic environmental quality objectives provided in the draft Environmental Protection Policy (Noise) can be referred to as a guide for appropriate indicators of noise level in the environment.

Activities will be planned and carried out in ways that minimise or avoid impacts on air, water and noise quality and comply with the requirements of Environment Protection Policies and the State Policy on Water Quality Management 1997.

Community interest in and concerns about environmental quality should be identified where an activity might have an impact on the environmental quality.

Threats to the quality of air, water and noise levels should be identified and actions should be taken to halt or minimise those impacts.

Where an impact on the quality of air, water or noise level is unavoidable, every effort should be made, using accepted modern technology and best practice environmental management, to minimise the impact and, where practicable, to restore natural parameters that have been disturbed.

Where environmental quality in a reserve is being, or could be, affected by an activity external to a reserve, options for avoiding or ameliorating the impacts should be explored in consultation with the proponent of the activity.

Management procedures and strategies should be developed to ensure that unacceptable impacts arising from management activities are avoided.

Indigenous vegetation along waterways will be protected from unnecessary disturbance. Where natural streamside vegetation has been cleared or degraded, consideration will be given to re-establishing native vegetation where this will contribute to improved water quality.

See Section 5.6 (Land Rehabilitation).

The use of pesticides and herbicides near waterbodies will be avoided where this could adversely affect water quality.

See Section 5.7 (Dangerous Goods and Agricultural Chemicals) and 5.2 (Weed Control) for references and guidelines on the use of herbicides.

Sites where active erosion is significantly reducing water quality should be prioritised for soil conservation and land rehabilitation works.
See Section 5.5 (Soil Conservation), 5.6 (Land Rehabilitation) and 6.4 (Road Maintenance, Closure and Barriers) for more information.

The Guide to Best Fire Management Practice for Land Managers in Tasmania should be consulted for guidelines on smoke management. See Section 5.1 (Fire Management).

Activities resulting in noise emissions that are likely to disturb fauna or inconvenience visitors should be minimised as far as practicable. These activities, if unavoidable, should be undertaken at times or locations that will cause least disturbance to fauna or inconvenience to visitors. See Section 6.6 (Air Access) for prescriptions relating to the noise associated with aircraft.

Monitoring

Monitoring of an activity or area should be prioritised in accordance with available resources, to include those areas most at risk of significant effects on water quality.

Where monitoring is undertaken, parameters will comply with the requirements of the State Policy on Water Quality Management 1997 and will include the key indicators for Water Quality Objectives as determined for the waterbody by the Board of Environmental Management and Pollution Control and public health authorities.

Monitoring the effects of reserve management activities and reserve user activities on water quality should comply with the requirements of the State water quality monitoring strategy, once developed. Existing, documented water sampling techniques and procedures should be complied with. See Key Sources.

The results of monitoring should be taken into account when evaluating activity proposals.

Key indicators for monitoring water quality include:

- biological (e.g. number of coliforms, type and abundance of phyto and zooplankton);
- physical (e.g. turbidity, total dissolved solids, temperature); and
- chemical parameters (e.g. dissolved oxygen, pesticides, nitrates).
This section contains prescriptions for management activities that, if undertaken appropriately, can reduce threats to reserve values. Existing protocols, guidelines and standards are referred to. Where there is not an appropriate reference document, detailed prescriptions are provided.

5.1 Fire Management

GENERAL PRINCIPLES
Fire management in reserves is conducted in accordance with the following documents:
- Inter-agency Fire Management Protocol;
- Guide to Best Fire Management Practice for Land Managers in Tasmania;
- Planning Conditions and Guidelines for Subdivisions in Bushfire Prone Areas;
- Ramsay, G.C. and Dawkins, D. 1993, Building in bushfire prone areas, SAA HB 36-1993
- Standards Australia, CSIRO;
- Schahinger, R. 2003, Conservation of Tasmanian Plant Communities threatened by Phytophthora cinnamomi. Strategic Regional Plan for Tasmania;
- relevant fire management plans;

The primary objective of fire management is to protect human life and property from fire. Other objectives include the maintenance of natural diversity of species and communities through applying appropriate fire frequencies and the protection of conservation values from adverse impacts due to fire in so far as these are consistent with the primary objective.

These objectives can be promoted by measures which:
- minimise the number, size and intensity of bushfires (unplanned fires);
- prepare for, and respond effectively to, bushfire;
- collaborate with neighbours and other agencies to prevent and suppress inappropriate fires;
- maximise safety and environmental sustainability in planned burning practices.

It is recognised that, for the maintenance of long-term ecological sustainability, planned (ecological) burns sometimes result in the short-term degradation of aesthetic values.

BASIC APPROACH
Fire management will comply with relevant statutory requirements.

See Section 8 (Approval Processes and Statutory Powers) and 3 (Activity Assessment) for further information on the assessment and approval of activities.

5.1.1 Bushfire
The following prescriptions for bushfire should be applied where it is practical to do so, unless the urgency of the situation prevents it.

Control of bushfires on, or threatening, a reserve will be given priority over all normal reserve management activities.

All fire fighting operations will comply with relevant occupational health and safety standards, guidelines and protocols in accordance with the Workplace Health and Safety Act 1995 (Part 3) and the Workplace Health and Safety Regulations 1998 (Regulations 23, 24 and 25).

Planning for the construction of infrastructure (ie. tracks, base camps and water holes) for fire management will consider potential impacts on natural and cultural values.

The impact of a planned (hazard reduction) fire on the natural and cultural values of a reserve will be considered. If appropriate, where the impact on values is likely to be significant, an alternative approach should be identified and employed.

Specialist advice should be sought to determine the impact.
Where specialist advice agrees, consideration should be given to allowing a wildfire to burn where it is likely to improve ecological diversity and is not likely to threaten neighbouring properties.

Access
Where vehicle access is required for fire fighting, and wherever possible, existing tracks should be used if suitable, instead of constructing new ones.

- If feasible and appropriate, information about natural and cultural values should be consulted and specialist advice should be obtained where information is not available:
  - before cutting new tracks or using heavy machinery off existing access tracks;
  - when the use of vehicles is required in Phytophthora cinnamomi Management Areas.

See Section 4 (Looking After Reserve Values) for relevant sources of information.

Permanent fire access tracks should be constructed and maintained to meet the requirements of Section 6.3 (Roads and Vehicular Tracks) and 6.4 (Road Maintenance, Closure and Barriers).

Where access for personnel and equipment is required in remote or visually sensitive locations, helipads should be considered instead of constructing new access tracks.

See Section 6.6 (Air Access) for details on the construction of helipads, and ‘Aircraft’ below.

Fire control lines
Where practicable, the location and method of constructed control lines should:
- minimise disturbance of vegetation and soil;
- avoid undue side-cutting and filling;
- avoid the creation of windrows of vegetation and soil;
- be located outside stream-beds and identifiable riparian zones.

Providing the primary fire management objectives can be met:
- hand-constructed control lines should be considered before creating bulldozed trails;
- the removal of overstorey vegetation should be located to avoid significant visual intrusion into the skyline and areas known to be of high visual value.

See Section 4.3 (Landscape) for information on visual management.
Aircraft
Use of aircraft will be thoroughly planned and satisfy agency and aviation authority requirements regarding competence and endorsement of personnel.

See Section 6.6 (Aircraft Access) for information on the construction of helipads and use of low exhaust helicopters.

Disease, pest plants and animals
Fire-fighting equipment, including rake-hoes and other hand tools, boots and vehicles should be maintained in a clean and mud-free condition well before fire suppression activities are likely.

Specific management prescriptions will apply to declared *P. cinnamomi* Management Areas. The relevant specialist should be consulted to determine these. Fire suppression strategies that do not involve personnel or machinery entering Management Areas should be employed where practicable. Control lines outside of the Management Areas should be utilised where burning of these areas is acceptable.

See Section 5.3 (Plant Disease Management) for further information on Management Areas and the Phytophthora cinnamomi Management Manual for procedures.

Fuel dumps and machinery servicing
Fuel dumps and places for servicing machinery will be located and undertaken at sites where pollution of streams or wetlands can be avoided.

Management of dangerous or hazardous substances
Goods that have potential to cause environmental harm (e.g. foam concentrates) will be adequately secured when being transported, to ensure that they do not become dislodged.

See Section 5.7 (Dangerous Goods and Agricultural Chemicals) for the transport of goods that are classified (including petroleum products) under the Dangerous Goods Act 1998.

Removal of rubbish
Any rubbish (including waste oil, empty drums, discarded machinery parts and general litter) generated during fire fighting will be removed as soon as practicable to an approved waste disposal site.

Rehabilitation
The rehabilitation requirements of areas affected by bushfire will be considered as soon as practicable after a wildfire is declared safe. The following issues should be considered:
- erosion hazards caused by soil disturbance or exposure due to the construction of temporary fire access tracks, helipads, camps and control lines;
- closure and rehabilitation of temporary fire access tracks that are no longer required for fire or other management purposes, once the fire is declared safe and rehabilitation works are completed;
- removal of soil and vegetation deposited in streams or wetlands by fire fighting operations, provided this can be achieved without a resultant increase in environmental disturbance.

Rehabilitation requirements for specific flora and fauna values affected by the fire or fire fighting operations will be determined in consultation with relevant specialists.

Rehabilitation works will be carried out to meet the requirements of Section 5.6 (Land Rehabilitation).

5.1.2 Planned Burns
Each planned burn will be subject to an approved burn plan following the format provided in approved documents. See General Principles, this Section.

Planned burning should be conducted in accordance with the information source: Using Low Intensity Fire in Land Management.

The location of the planned fire boundary will take into account fire control requirements and the natural and cultural values (including Aboriginal resources) present at the location.
The officer in charge of the burn will adopt measures for the control of the burn so that the final area of the fire is, as far as practicable, within the defined fire boundary.

Planned (hazard reduction) burning should not take place in areas known to support significant fire-sensitive species unless adequate measures are undertaken to protect these species or the risk of bushfire is very high.

Planned burns should not be conducted near cave entrances, sinkholes and other karst features that could be adversely affected by fire. Specialist advice should be sought where there is uncertainty regarding the presence of karst features or their susceptibility to fire.

Where planned burns are conducted with the objective of maintaining or enhancing Aboriginal resources, planning should involve the Aboriginal community. See Section 4.5 (Cultural Values) and 4.5.1 (Cooperative Management of Aboriginal Values).

Planned (ecological) burns to maintain habitat should only be considered where fire-adapted species are dominant and where fire-sensitive vegetation can be protected from the burn. Specialist advice should be obtained to determine appropriate protective measures.

Consultation with the Threatened Species Unit of DPIWE will be required where threatened species are known to occur within the area and are likely to be adversely affected by a planned burn.

Planned (ecological) burning should be:
- undertaken in accordance with fire frequencies appropriate to the maintenance of targetted elements of biodiversity. Specialist advice should be obtained to determine appropriate fire frequencies;
- carried out so as to minimise the risk of fires of a frequency and/or intensity that is likely to cause significantly accelerated erosion; and/or
- carried out so as to minimise the risk of peat fires.

Rehabilitation
Rehabilitation will be in accordance with the prescriptions in Section 5.6 (Land Rehabilitation).

Monitoring
The outcomes of planned (ecological) burns will be monitored where specialist advice indicates that it is desirable to:
- establish whether fire management objectives have been achieved; or
- monitor the response of natural and cultural values to the burn.

Any program of prescribed burning to maintain habitat will incorporate a monitoring program to assess the effects of burning on target species and other species.

Monitoring of an activity or area should be prioritised in accordance with available resources, to include those areas most at risk of significant impacts from prescribed burning.

5.2 Weed Control

GENERAL PRINCIPLES
Any plant species, including native species, growing outside its natural range, is a potential weed. Weeds have a detrimental effect on reserve conservation values, and can spread to neighbouring properties.

Weed control must be prioritised according to species and potential impact, feasibility of treatment and available resources.

The objectives of weed management are to protect conservation values by:
- preventing or minimising the spread of weeds in accordance with specified statutory obligations;
- preventing or minimising the invasion of native plant communities and habitats by weeds;
- managing culturally significant introduced plants while providing for the protection of natural and cultural values to the maximum practicable extent.
Databases and Web Sites

The most recent list of weeds declared under section 10 of the Weed Management Act 1999 can be found at www.thelaw.tas.gov.au > Statutory Rules > Weed Management (declared weeds) Order 2001.

General information on weed management, including information sheets and weed management plans can be found at www.dpiwe.tas.gov.au then visit > quarantine, pests and diseases > weeds & other pests.

The Tasmanian Environmental Weed Database and Weed Treatment Database is available via the Geryon server (PWS restricted site).

Local provenance - See Section 5.6 (Land Rehabilitation) for the definition of this term.

Weed control is most effective if undertaken as part of a regional, community-based strategy, as promoted by the WeedPlan: A Tasmanian Weed Management Strategy.

The Weed Management Act 1999 is the principal legislation for the declaration and control of weeds in Tasmania.

Plant species declared as weeds under the Weed Management Act 1999 must be managed in accordance with the Weed Management Plan which is prepared in accordance with the Act. Reserve managers may be subject to control notices issued by weed inspectors appointed under the Act and to penalties detailed in the Weed Management Regulations 2000.

Some introduced plants, including weeds, contribute to the significance of sites of cultural and historical significance.

Legislation and associated codes of practice control the storage, use and handling of chemicals including those used for weed control.

It is the reserve manager's responsibility to protect people and the environment during the application of chemicals by ensuring guidelines and instructions are followed.

See Section 5.7 (Dangerous Goods and Agricultural Chemicals) for more information on the storage, use and handling of agricultural chemicals.

The use of chemicals must not prejudice the achievement of the water quality objectives as determined under the State Policy on Water Quality Management 1997.

See Section 4.8 (Environmental Quality).

Information sources include:


Basic Approach

Reserve weed management programs should be integrated with regional weed management strategies where they exist.

Occurrences of suspected new weed species in Tasmania will be identified, reported and responded to in accordance with the recommendations of Responding to Incursions: A Generic Incursion Management Plan for Forest Pests and Diseases.

Weed prevention

Non-native or non-local provenance plants will not be deliberately introduced unless permitted in a management plan or an approved program to maintain or restore cultural values or in a threatened species recovery plan for maintenance of an existing situation.

The use of marram grass as an erosion control measure will be in accordance with Section 5.6 (Land Rehabilitation).
Where disturbance to soil and/or vegetation could increase the risk of weed infestation, the site of the disturbance should be monitored and weed infestations responded to appropriately. Monitoring should be prioritised in accordance with available resources, taking into account the potential for weed infestation and the level of threat to natural values.

The potential for vehicles to spread weed seed should be recognised and appropriate measures should be taken to reduce the risk of spreading weeds via this method.

As far as practicable, earthmoving machinery should be in a clean state prior to entering and undertaking works within a reserve at locations that are essentially free of weeds. Before entering a reserve, machinery should be hosed or cleaned (including underneath), removing any dirt or mud that could spread weeds or diseases, unless the urgency of an incident precludes this. For procedures refer to Tasmanian Washdown Guidelines for Weed and Disease Control (in press).

Consideration should be given to restricting public vehicle access to sensitive areas where vehicle access is likely to increase the threat of weed invasion.

Where soil and gravel is required for works, priority should be given to obtaining these materials from weed-free stock. Where resources permit, freshly crushed rock that is free of soil should be used as a gravel source if appropriate for the proposed use.

Table drain spoil should be deposited in dump sites that are appropriately sited and subject to weed monitoring and control.

Activities or developments which can increase the nutrient level of soils (eg. wastewater disposal) should be avoided at locations that are weed-free and unlikely to be subject to weed infestation in the absence of increased nutrient status.

Where an activity increases the nutrient level of soil, or disturbs soil, the area should be monitored for weeds. If new weed infestations are detected, these should be subject to appropriate control measures.

Reserve managers should liaise and cooperate with the relevant land manager or owner to control potentially invasive weeds from adjacent areas spreading into or out of reserves.

Planning and assessment

Specialist advice should be obtained where a suspected weed cannot be identified.

As far as practicable, the extent of a weed infestation should be periodically assessed and appropriate and strategic control measures should be implemented.

Management of introduced plants at sites of cultural significance should seek to control weeds while protecting cultural heritage.

See Section 4.3 (Landscape) and 4.5 (Cultural Values) for more information on the management of cultural landscapes and cultural values.

Weed management activities will give priority to the following situations:

- where weeds endanger threatened species and remnant plant communities;
- where a new species of weed has recently become established and there is potential for it to become a major environmental weed;
- where weeds listed under the Weed Management Act 1999 have been identified;
- where coordinated regional control programs are already in place.

Particular attention should be given to inspecting and monitoring:

- areas that are prone to weed infestation in a reserve, such as disturbed sites, wastewater disposal sites, roads, tracks and waterbodies;
- areas that are free or relatively free of weeds, including the margins of larger weed-free areas;
- the spread of significant weeds on road and track corridors.

High nutrient levels and disturbed soil favour the establishment and spread of weeds.
Weed control methods
Appropriate weed control methods will depend on the target species, environmental considerations, practicality and costs. Specialist advice should be sought where weed control problems are encountered.

Weed control techniques will consider possible impacts on non-target species. The approach may need to be modified to reduce or avoid impacts on non-target species.

Integrated weed management techniques should be applied in order to reduce the risk of re-invasion and reliance on chemical control methods. That is, factors that make sites susceptible to weed invasion, such as sources of disturbance, nutrient enrichment and the presence of weed vectors, should be identified and addressed.

Where the rehabilitation of affected areas is required following the eradication of environmental weeds, works should be carried out in accordance with the prescriptions described in Section 5.6 (Land Rehabilitation).

The handling, use and storage of agricultural chemicals for weed control will comply with prescriptions specified in Section 5.7 (Dangerous Goods and Agricultural Chemicals).

Agricultural chemical use will comply with the Codes of Practice adopted by the Tasmanian Agricultural, Silvicultural and Veterinary Chemical Council, under the Agricultural and Veterinary Chemicals (Control of Use) Act 1995.

Herbicide use along or near waterbodies will comply with the Guideline for Safe and Effective Herbicide Use near Water and the Code of Practice for Ground Spraying. See the weed management web sites.

Monitoring
Where resources permit, weed control should be followed up by an annual inspection of the infested site to ensure that any recurrence of the target weed is controlled.
5.3 Plant Disease Management

GENERAL PRINCIPLES
The expression of disease in plant communities is a function of:
- the presence of susceptible plant species;
- suitable environmental conditions; and
- the nature of the pathogen or disease causal agent.

The objective of plant disease management is to maintain natural disease regimes within native plant communities. This objective will be promoted by measures to:
- minimise the introduction of alien plant pathogens to Tasmania, and minimise the spread of established exotic plant pathogens (eg. Phytophthora cinnamomi or Phytophthora 'root rot');
- minimise the adverse impacts on the ecology of native plant communities, due to introduced plant pathogens (eg. P. cinnamomi);
- minimise the unnatural disturbance of native vegetation where this may induce significant levels of disease (eg. myrtle wilt) in the vegetation.

The primary plant disease problems for the management of Tasmanian reserves are P. cinnamomi and myrtle wilt.

Phytophthora cinnamomi is a key management issue in the relatively warm and moist lowland parts of Tasmania. Vulnerable vegetation types include heaths, heathy eucalypt woodlands and button grass moorlands.

Phytophthora cinnamomi is unlikely to be an issue in the following situations:
- areas where the altitude is >700 m ASL or the mean annual rainfall is <600 mm;
- rainforest, wet forest or tall (>2m) dense wet scrub (myrtle wilt is a consideration);
- dry sclerophyll vegetation with a predominantly grassy understorey;
- dense coastal scrub, wetland, aquatic or beach vegetation.

A series of special management areas for the protection of plant communities and species that are highly susceptible to P. cinnamomi are identified in the Phytophthora cinnamomi Strategic Regional Plan for Tasmania. In these areas, control of P. cinnamomi is the primary management priority.

Information sources include:
- Databases - Maplink (Parks and Wildlife Service), GTSpot and CONSERVE (Forestry Tasmania);
- Phytophthora cinnamomi Management Manual (in press) contains hygiene requirements;
- Tasmanian Washdown Guidelines for Weed and Disease Control (in press);
- Schahinger, R. (in press), Conservation of Tasmanian Plant Communities threatened by Phytophthora cinnamomi, Strategic Regional Plan for Tasmania.

BASIC APPROACH
General disease management
Occurrences of suspected new diseases in Tasmania will be identified, reported and responded to in accordance with the recommendations of Responding to Incursions: A Generic Incursion Management Plan for Forest Pests and Diseases.

During reserve management activities, signs of new plant disease (eg. unexplained plant death or decline) that might indicate the presence of introduced pathogens, or the unnatural development of disease associated with native pathogens, should be documented and the relevant specialist notified.

The Phytophthora cinnamomi Management Manual (in press) should be referred to for field procedures:
- for recognising plant diseases and for methods of collecting samples for analysis; and
- when moving between infected and uninfected sites (hygiene procedures).

Disturbance (eg. blazing or damaging trees) that could predispose native vegetation to disease (such as myrtle wilt) will be avoided or minimised, particularly where Nothofagus cunninghamii (myrtle) is present.
Options for reducing the level of disturbance, and/or maintaining a buffer zone in the vicinity of susceptible plants, will be considered if an activity is unavoidable.

Management of *Phytophthora cinnamomi*

Prescriptions in the *Phytophthora cinnamomi* Management Manual should be adhered to in areas susceptible to *P. cinnamomi*.

The *P. cinnamomi* distribution records for Tasmania should be referred to when planning activities, so that known sites of infection are considered and avoided where possible.

Specific management prescriptions will apply to any proposed activity within declared *P. cinnamomi* Management Areas. Consult the relevant specialist to determine the prescriptions required.

Planning for activities

Specific procedures should be applied as set out in the *Phytophthora cinnamomi* Management Manual, which pertains to a wide range of activities, including site developments; walking tracks; roads and firebreaks; extraction and use of gravel and other quarried materials; fire management; land rehabilitation and aircraft use.

See Section 6.5 (Non-vehicular Tracks) for more information on wash-down stations.

Generally, when planning a new development or activity the following procedure should be followed:

Identify whether the area is susceptible to *P. cinnamomi* or myrtle wilt. Check with records on the Maplink, GTSpot or CONSERVE database (Forestry Tasmania).

If *P. cinnamomi* or myrtle wilt is an issue, check the current disease status of the area. For myrtle wilt, minimise damage to trees.

If the proposed activity is located in a *P. cinnamomi* Management Area, consult a specialist.

If *P. cinnamomi* is known to be present, manage in accordance with Table 2.

If *P. cinnamomi* is not present, or is unknown, but the location is susceptible and not remote (eg. adjacent to a road), manage in accordance with Table 2.

If *P. cinnamomi* is not present or is unknown but the location is susceptible and remote (ie. no or restricted vehicle access), consult a specialist about the activity.
### Table 2: General management requirements for sites susceptible to Phytophthora cinnamomi

<table>
<thead>
<tr>
<th><strong>P. cinnamomi status</strong></th>
<th><strong>Threat</strong></th>
<th><strong>Management requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Site is infected by P. cinnamomi</td>
<td>Further spread to adjacent susceptible areas</td>
<td>If site is not in common use, minimise activity or developments in infected areas. If site is in heavy use, contain activities to existing infected areas and those surrounding areas where spread is inevitable. Avoid the development of new tracks crossing into adjacent uninfected areas.</td>
</tr>
<tr>
<td>Site is in an area not known to be infected by P. cinnamomi but is susceptible to infection</td>
<td>Infection of the area</td>
<td>If a development is proposed, undertake field surveys of the site and adjacent areas to determine P. cinnamomi status. If surveys confirm disease-free status, the following measures should be applied: Minimise activities that have the potential to introduce P. cinnamomi. Control vehicular access along tracks where possible. Apply basic hygiene to high-risk activities, eg. earthmoving operations. Minimise introduction of soil, gravel and plants to the area. Ensure all material introduced is screened for potential P. cinnamomi infection. Maintain vehicles and tools in a clean state for emergency operations, such as fire fighting, in P. cinnamomi-free areas. Restrict activities to times when soils are dry to minimise transfer of P. cinnamomi.</td>
</tr>
</tbody>
</table>
Exotic animals occur in a place as a result of direct, deliberate or accidental actions of humans (not including deliberate reintroductions to an animal’s former range). Such as introducing insects for biological control of a pest.

Alien animals are thought to have been introduced by humans, but are now more or less naturalised (eg. corella).

Feral animals are those that have escaped from primary production or domestic sources and have become established in the wild (eg. goats and cats).

5.4 Exotic Animal Control

GENERAL PRINCIPLES
The objective of managing exotic animal species is to minimise and/or reverse their adverse impacts on natural and cultural values. This will be promoted by preventing, as far as practicable, further uncontrolled introductions, and by suppressing or eradicating exotic animal species that threaten values.

BASIC APPROACH
Threats to natural and cultural values arising from the presence of exotic animal species should be identified and control programs should be implemented where this is cost-effective and feasible.

Priority will be given to the early detection of, and response to, new exotic animal species which could threaten values and for which suitable control measures are available.

Control of feral animals will be addressed through control programs, liaison with neighbours, and other measures as appropriate.

Control of alien fauna species should be undertaken where the species is likely to adversely affect natural and cultural values and suppression or eradication measures are cost-effective and feasible. Fauna management plans will be prepared prior to the implementation of major control programs for alien fauna species.

Fauna management plans will incorporate integrated pest management principles.

That is, control methods will be:
- based on coordinated use of information on pests, environmental impact and available control methods;
- implemented by the most economical means that poses the least possible hazard to the environment, people and property.

Biological control methods (eg. the use of exotic insects, bacteria and viruses) either for the purpose of directly controlling other exotic species (eg. insects or plants) or as a vector will be preceded by an environmental impact assessment. Such use would be contemplated only where the assessment indicates that there are no undue risks to the survival of native populations, economic crops, human health and/or property.

Exotic fauna populations may be retained where they contribute to the cultural heritage significance of a place, or are used for control programs for other exotic species. This would be contemplated only where the exotic fauna can be effectively managed to avoid their unplanned spread and/or other unacceptable impacts on conservation values.

Community partnership agreements should be developed as a mechanism for working with commercial beekeepers and be guided by the requirements of the Code.

See Section 9.2 (Beekeeping) for further information.

Where dogs, horses or other domesticated species are permitted to enter a reserve, this will be subject to such conditions or constraints as required to minimise impacts on natural and cultural values.

See Section 4.2 (Flora and Fauna Values) for information relating to the relocation of indigenous Tasmanian fauna.

Monitoring
Monitoring to assess the effects and effectiveness of management methods detailed in fauna management plans should be included in the control program. Success in controlling the target species and unacceptable impacts on non-target species, populations and ecosystems should be evaluated.

Fauna management plans should be reviewed regularly and, if required, modified in the light of monitoring outcomes.
5.5 Soil Conservation

GENERAL PRINCIPLES
The objectives of soil conservation are to:
- maintain or restore natural soil processes, including rates of soil production, erosion and sedimentation; and
- avoid soil degradation except where this occurs as a natural process.

In order to control soil degradation, the underlying causes must be addressed (e.g. inadequate drainage on roads and tracks, grazing). In addition, remedial action may be required to alleviate sources of disturbance and restore natural parameters.

Recognising the onset of soil degradation and responding quickly are key actions in protecting soils from damage.

Information sources include:

BASIC APPROACH
The potential for soil degradation will be considered in determining whether a proposed activity is appropriate at a site. The activity should be modified, or relocated to a less sensitive site, if it is likely to result in soil degradation.

Assessment of the potential impacts of an activity on soil will take into account soil erodibility and degradation potential. See Table 3 for guidance.

Where specific site conditions are not covered by this Code, the Forest Practices Code should be used.

Potential for soil degradation is generally higher during wetter periods so activities causing ground disturbance should be scheduled for dry periods.

Roads, four-wheel drive tracks and walking tracks should be managed to minimise soil degradation. Consideration should be given to closing specific four-wheel drive tracks during wet periods if this will reduce soil degradation. This is particularly important for areas with peat soils that are very vulnerable to physical disturbance when wet.

See Section 6.3 (Roads and Vehicular Tracks) and 6.4 (Road Maintenance, Closure and Barriers) for further information on soil conservation.

Speed limits and other restrictions on use of watercraft will be considered where lake and river banks are eroding or threatened by waves generated by watercraft.

Particular attention will be given to reducing the impact of new developments on natural drainage lines. Disturbance to natural drainage channels should be avoided. Runoff from cleared areas will be diverted into existing drainage lines through protected entry points (e.g. sediment traps).

Sites with one or more of the following features are likely to be particularly susceptible to erosion and will be given priority in avoiding disturbance to soils and vegetation:
- sand dunes and other unconsolidated substrates;
- soils in the high to very high erodibility classes (Table 3);
- where there is evidence of previous landslips;
- drainage lines, watercourses and river banks with alluvial deposits;
- slopes in excess of 50 m and/or >15°;
- karst and karst catchments;
- glacial deposits;
- peat soils;
- alpine and subalpine areas.

Soil degradation can involve a range of processes, such as: erosion, compaction, puddling, mixing, waterlogging and salting, mass movement (land-slips), frost heave, burning of peat, re-deposition and sedimentation. In some situations these may be natural processes, although soil degradation often occurs when the processes are changed or accelerated as a result of human actions.

The Forest Practices Code provides more information on a range of topics not covered by this Code, including information on and prescriptions for soil erodibility classes, landslide threshold slope angles, assessing soil water status and activities on vulnerable soils and steep land.
Specialist advice should be sought where the disturbance is unavoidable.

Where an activity is unavoidable and is likely to lead to soil degradation, remedial measures will be undertaken to reduce the extent of damage and to hasten site recovery.

Rehabilitation activities should be specified in a rehabilitation plan.

See Section 5.6 (Land Rehabilitation).

Where earthmoving activities are necessary, they should be carried out in accordance with the following guidelines:

- keep ground disturbance to a minimum;
- identify cultural values at the early planning stage and manage in accordance with the Code;
- maintain natural slopes as far as possible;
- provide adequate drainage to the site by diverting runoff into existing drainage lines through protected entry points (e.g. sediment traps);
- use appropriate machinery for the particular task;
- incorporate erosion control measures at the same time as the earth works associated with the development;
- retain topsoil for rehabilitation at the site or, if surplus, at other nearby sites requiring rehabilitation;
- time construction to minimise the duration of soil exposure;
- implement measures to prevent the introduction of weeds or disease.

See Section 4.5 (Cultural Values), 5.2 (Weed Control), 5.3 (Plant Disease Management) and 5.6 (Land Rehabilitation) for more information.

Management of erosion hazards on roads and walking tracks will be in accordance with the requirements of Section 6.3 (Roads and Vehicular Tracks), and 6.5 (Non-vehicular Tracks).

Consideration will be given to retaining spoil cleaned from table drains for use in rehabilitating degraded areas unless this conflicts with the management of weeds and soil-borne pathogens.

See Sections 5.2 (Weed Control) and 5.3 (Plant Disease Management) for more information on these topics.

Spoil should not be placed over intact vegetation or in locations where it will erode and contribute to sedimentation elsewhere.

Evidence of accelerated erosion as a result of an activity or development will be assessed as a matter of priority and appropriate stabilisation and/or rehabilitation measures implemented.

High and very high erodibility class soils

Activities planned for high and very high erodibility class soils (Table 3) will require:

- detailed planning;
- equipment and/or machinery that is suited to the conditions;
- a suitably experienced and careful operator;
- close supervision;
- ongoing monitoring to assess erosion.

Disturbance to soil and vegetation on high and very high erodibility class soils should be avoided as far as possible. Where disturbance is unavoidable, priority should be given to protecting drainage lines and mid and lower slopes as the potential for erosion and sedimentation is greatest in these areas.

Interim stabilisation using jute mesh or similar geotextiles should be considered.

Priority will be given to establishing vegetation cover as soon as possible.

Moderate-high, moderate and low erodibility soils

Careful planning and execution of earthworks on all soil types should be conducted where proposed activities have the potential to impact on soils.
Monitoring
Disturbed sites should be periodically checked for evidence of soil degradation and to assess success of rehabilitation. Ideally, checking should be done after heavy rain and/or periods of peak visitation where these factors could influence rehabilitation.

If checking shows that additional remedial measures are required, then these should be carried out as soon as practicable. Interim measures to stabilise rapidly degrading sites may be considered until more permanent repairs can be done.

<table>
<thead>
<tr>
<th>Parent material</th>
<th>Dominant soils/vegetation</th>
<th>Erodibility</th>
<th>Indicative vulnerability to: (see notes for explanation)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heavy machinery</td>
</tr>
<tr>
<td>dolerite or basalt</td>
<td>loam, clay loam or clay with good vegetation cover</td>
<td>low</td>
<td>1</td>
</tr>
<tr>
<td>siltstone or mudstone</td>
<td>loam, clay loam or clay with average vegetation cover</td>
<td>moderate</td>
<td>2</td>
</tr>
<tr>
<td>sandstone, limestone or dolomite</td>
<td>loamy and clayey soils with poor vegetation cover</td>
<td>moderate – high</td>
<td>3</td>
</tr>
<tr>
<td>quartzite or coarse sandstone granite</td>
<td>* loam and sand with sparse vegetation cover or peat (when wet or dry)</td>
<td>high</td>
<td>4</td>
</tr>
<tr>
<td>granite or sandstone weakly consolidated alluvium, colluvium, sands, glacial deposits and dunes deposits</td>
<td>* sand and fine gravel with very sparse vegetation or peat (when very dry or very wet)</td>
<td>very high</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 3  
Indicative soil erodibility and degradation potential. This table is intended as an example only. For more complete information on managing soils refer to: Grant et al. 1995, Forest Soils of Tasmania. A Handbook for Identification and Management.

Indicative vulnerability is an indication of the likelihood of soil degradation in response to a specified disturbance. Vulnerability scale:
1 = low; 2 = moderate; 3 = high; 4 = very high; 5 = extreme

Vulnerability to degradation will vary with the degree of soil saturation. Most soils exposed by vegetation removal and then subject to heavy rain or high wind will erode. Slope is also critical with long (>50m) and steep (>15°) slopes being most at risk, particularly where the surface soil is loose.

*Note that where vegetation with moderate to high cover occurs on these soil types, but is removed for any reason, then the erodibility class is high – very high.
5.6 Land Rehabilitation

GENERAL PRINCIPLES
The objective of land rehabilitation is to restore, as far as practicable, the original soil, topography and vegetation of disturbed sites.

There are four basic phases in most rehabilitation projects: planning, earthworks (stabilising the site), revegetation and maintenance.

Information sources include:
- Bacon, C.A. 1999, Mineral Exploration Code of Practice;
- Guidelines for the Rehabilitation of Quarries and Extractive Pits;
- Quarry Code of Practice;
- Duckett, T.A. 1990, Rehabilitation Guidelines for Forest Construction.

BASIC APPROACH
Planning
An important part of the preliminary assessment is to identify an activity's potential impact on the environment, the means of minimising the impact and any rehabilitation required. Planning for rehabilitation should include:

- site details: tenure, zoning, location, size;
- proposed earthworks;
- measures for stockpiling topsoil, including measures to ensure the stockpile is stabilised and remains biologically active until required;
- machinery hygiene requirements;
- revegetation treatment, specifying species, seed collection or seedling propagation and broadcasting or planting rates;
- fertiliser requirements, specifying type, application rates and broadcasting method;
- preferred seasons for rehabilitation stages (see Table 4);
- project supervision;
- cost estimates and resources available;
- schedule for appropriate timing of rehabilitation activities.

Earthworks should be carried out to the highest possible standard to avoid the need for machinery to return to the site. Carter Levee, Central Highlands.
Advice should be obtained when developing rehabilitation plans. Plans should be reviewed by the relevant specialists before work begins.

Where there is continuing disturbance (e.g. grazing, vehicle or foot traffic) on a degraded site, this disturbance should be removed as soon as possible and prior to rehabilitation of the site.

Rehabilitation works should be scheduled to coincide with optimum seasonal conditions wherever possible. Table 4 outlines preferred months for specific rehabilitation treatments but should be used as a guide only.

Rehabilitation works should be planned so that successive stages follow on earlier stages with minimal delays.

Some sites will require a special approach to rehabilitation due to the nature of the site itself, the surrounding area or past use of the degraded site. Specialist advice should be sought when planning rehabilitation of the following:
- alpine and subalpine environments;
- sites close to or within areas of high conservation value;
- karst areas or karst catchments;
- sites with Aboriginal relics;
- sites of cultural or historic significance;
- areas with acid mine drainage problems or other contaminated sites;
- coastal sites;
- highly visible areas with high visitation;
- areas with high wilderness quality;
- places with Aboriginal relics;
- sites where there is uncertainty about the appropriate approach to rehabilitation.

Rehabilitation earthworks
Drainage works and reshaping should be considered where it is necessary to provide a stable surface to the site, restore natural contours, or reduce erosion.

Ripping should be considered where soils have been compacted, to enhance soil porosity.

Ripping should be done along the contour to reduce water runoff and increase water infiltration into the site.

Ripping should not be done when the soil is too wet as soil can be moulded into large chunks that damage soil structure.

Rehabilitation earthworks should be carried out to the highest possible standard to avoid the need for heavy machinery to return to the site, as this could hinder and damage rehabilitation.

Machinery operators should be fully briefed on the aims of the project and appropriately supervised.

Disturbances to intact vegetation should be minimised and the movement of machines should be limited wherever possible to existing degraded areas. If there is any possibility of confusion, the boundaries of the operational area should be clearly marked at the site.

Consideration will be given to selecting the most appropriate earthmoving machinery for the site conditions and the task.

Where rehabilitation requires the spreading of topsoil, every effort should be made to ensure that enough material is available. If stockpiled soil is unavailable or insufficient, imported soil should be free of disease and weeds and, as far as possible, be physically and chemically similar to soil at the site being treated.

Phytophthora cinnamomi and weed management protocols will be observed at all stages of rehabilitation. The protocols contain specific requirements for imported soil.

See Section 5.2 (Weed Control) and 5.3 (Plant Disease Management) for more information.
Local provenance will need to be interpreted on a site-specific basis. The aim is to avoid introducing stock from genetically different populations. In general, this can be achieved by collecting seed from within the general area of the site being treated; seed from within 20 km of the site (and preferably the same altitudinal range, geology, soil type and climate) will generally be acceptable if closer sources are unavailable.

Revegetation

Earthworks will be completed and the surface prepared to create suitable conditions for plant growth prior to revegetation.

Revegetation methods should be site-specific, but will generally be by direct seeding. Use of seedlings should be considered where rapid revegetation is required or where adverse germination conditions exist.

Local species of local provenance should be used in revegetating a site.

Seed should be collected from multiple individuals within a species to avoid propagating from a limited number of individual plants.

Where a nurse crop is considered, species of local provenance will be preferred. Non-local provenance nurse crops may be acceptable in some situations (eg. sterile grasses may be considered). Seek specialist advice before using non-provenance nurse crops to determine their appropriateness.

Rehabilitation works should incorporate suitable measures such as monitoring to ensure that these do not cause a weed problem.

A mix of vegetation layers in keeping with the natural vegetation of the site should be considered, eg. grasses and understorey species as well as trees.

Nitrogen-fixing species (eg. Acacia, Pultanaea, Bossiaea, Kennedia spp.) should be included in the revegetation program to assist improvement in the nutrient status of the soil, where they occur naturally in the local flora.

Seeding or planting should be timed to coincide with seasonal factors favourable to plant growth (see Table 4).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>J</th>
<th>F</th>
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<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
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<th>N</th>
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</thead>
<tbody>
<tr>
<td>Drainage works</td>
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<tr>
<td>Soil stripping</td>
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<tr>
<td>Soil re-spreading</td>
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<tr>
<td>Ripping (before soil re-spreading)</td>
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<tr>
<td>Ripping (after soil re-spreading)</td>
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<tr>
<td>Direct seeding (native species)</td>
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<tr>
<td>Fertilising</td>
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</tr>
</tbody>
</table>

‡ Optimum time for treatments

- Treatments can be undertaken but not during periods of heavy/frequent rain or saturated soil conditions
- Treatment can be undertaken but only when there are moist soil conditions
- Treatment at this time of year not recommended
The use of fertiliser should be considered where this can enhance the rate of revegetation but should not be used in the following circumstances:

- where there is a risk of it polluting surface waters (streams, lakes, dam storages, swamps or wetlands);
- where a karst system or aquifer is present;
- near vegetation that is sensitive to fertiliser, such as heaths on sand or other vegetation which is known to support orchids; or
- if it is likely to lead to a weed problem.

Multiple applications will generally be required, subject to consideration of the potential impacts on water quality.

To protect the soil and help retain moisture, mulching with straw, brush or scrub cleared during the development, geotextiles, or other suitable materials should be considered, particularly on steep slopes or where frost heave is a potential problem. Hay is generally not suitable as it may contain weeds.

Straw bales should only be used if they have been sanitised or otherwise certified free from seed.

Marram grass should only be used to stabilise dunes (i.e. to control unnatural erosion) in areas where it is extensively established and then only after consideration of the ecological consequences and whether removal is feasible. All other options for stabilising dunes should be considered before resorting to the use of marram grass.

Where native coastal vegetation is present to a significant degree, the planting of suitable local provenance species together with structural measures such as sand-trapping fences, jute mesh and geotextiles should be considered. See definition of local provenance species above.

Maintenance
The rehabilitation plan will specify ongoing maintenance requirements, such as: additional erosion control and stability works; re-application of fertiliser; re-seeding or replacement planting of unsuccessful seedlings; control of browsing animals; weed control and maintenance of vehicle access barriers, fencing or rehabilitation signs.
Monitoring

Disturbed sites should be periodically checked for evidence of soil degradation and to assess rates of rehabilitation. Ideally, checking should be done after heavy rain and/or periods of peak visitation where these factors could influence rehabilitation.

If a follow-up check shows that additional remedial measures are needed, these should be carried out as soon as practicable. Interim remedial measures to stabilise rapidly degrading sites may be considered as a short-term measure until more permanent repairs can be made.

5.7 Dangerous Goods and Agricultural Chemicals

GENERAL PRINCIPLES

An ‘Agricultural Chemical Product’ is defined by Section 7 of the Agricultural and Veterinary Chemicals Code Act 1994.

A ‘Dangerous Good’ is a substance and/or article that is prescribed as, or determined to be a dangerous good under the Dangerous Goods Act 1998 and is listed in the Australian Dangerous Goods Code 6. See the web sites for more details.

A ‘Hazardous Substance’ is defined by the National Occupational Health and Safety Commission’s Approved Criteria for Classifying Hazardous Substances. See the NOHSC web site.

Generally, hazardous substances are chemicals or other substances that can affect the health of anyone in the workplace causing illness or disease. They are often industrial chemicals but can include agricultural chemicals (such as herbicides), paints, glues, bleaches, detergents, disinfectants and fuels such as petrol, diesel, kerosene and methylated spirits.

The reserve manager has responsibilities under the:

- Environmental Management and Pollution Control Act 1994 to protect the environment (including specific reserve values eg. water resources and karst systems considered vulnerable to chemical products);
- Workplace Health and Safety Act 1995 to protect employees from the effects of dangerous goods and hazardous substances; and
- Local Government (Building and Miscellaneous Provisions) Act 1993 and its relevant regulations to obtain all necessary building and plumbing permits to ensure compliance with the Building Code of Australia and the Tasmanian Plumbing Code.

These responsibilities are achieved by ensuring:

- that the most cost-effective agricultural chemical consistent with minimum toxicity to humans and the environment is used; and
- storage, transport, handling, application and disposal is in accordance with relevant legislation, codes of practice and guidelines.

The following legislation directs the storage, use and transport of dangerous goods:

- Dangerous Goods Act 1998;
- Dangerous Goods (General) Regulations 1998; and
- Dangerous Goods (Road and Rail Transport) Regulations 1998.

Licensing of premises (a Keeper’s Licence) is required under the Dangerous Goods (General) Regulations 1998 where the chemicals and substances stored are listed as dangerous goods in the Australian Dangerous Goods Code 6 and where these dangerous goods are stored in quantities that exceed the placarding exemption limits.

Premises that are licensed to keep dangerous goods require Hazchem placarding.

The Workplace Standards web site provides further information on exemptions to licensing.

Diesel fuel requires placarding in accordance with AS 1940 -1993 The Storage and Handling of Flammable and Combustible Liquids.
A Material Safety Data Sheet (MSDS) is defined by the Agricultural and Veterinary Chemicals Code Act 1994 and is required to be displayed under this legislation where agricultural chemical products are stored or used.

Hazardous substances do not commonly occur in the workplace but where they are encountered their handling and storage is directed by the NOHSC Standard for the Control of Workplace Hazardous Substances and the National Code of Practice for the Labelling of Workplace Substances in accordance with the Workplace Health and Safety Act 1995.

See Section 6.12 (Sanitary Systems) for information on the transport and disposal of controlled waste.

BASIC APPROACH
Agricultural chemicals, flammable and combustible liquids, dangerous goods and hazardous substances will be handled, used, labelled and stored in accordance with state legislation and referred standards and codes of practice.

The use of chemicals will not prejudice the achievement of water quality objectives as determined under the State Policy on Water Quality Management 1997.

Only chemicals registered by the National Registration Authority will be used for spraying and these will be used in accordance with their approved label.

Only suitably trained people will be permitted to handle, use and apply agricultural chemicals.

Contractors applying agricultural chemicals in reserves will be licensed as required by the Agricultural and Veterinary Chemicals (Control of Use) Act 1995.

All persons handling or using agricultural chemicals will have ready access to the Material Safety Data Sheets for those chemicals.

MSDS will be kept in an accessible and visible location in proximity to the goods stored.

Protective equipment will be worn in accordance with the relevant MSDS as supplied by the manufacturer or as per labelled directions.

A risk management approach will be taken for activities that use, transport or store significant quantities of materials that could cause serious or material harm to soils or waters if released.

Emergency procedures will be documented for the storage and use of dangerous goods, agricultural chemicals and fuels.

Agricultural chemical use will comply with the codes of practice adopted by the Tasmanian Agricultural, Silvicultural and Veterinary Chemical Council, under the Agricultural and Veterinary Chemicals (Control of Use) Act 1995.

Herbicide use will comply with the Code of Practice for Ground Spraying.

The use of chemicals should be minimised wherever practical. Spraying at the appropriate times of year/day and when weeds are young can minimise the use of chemicals.

The most cost-effective agricultural chemical, consistent with minimum toxicity to humans and environmental risk, should be used.

Practices should be adopted that minimise the amount of waste produced. Waste products should be recycled where appropriate.

Any person proposing to use chemicals to control weeds in watercourses or along stream banks should first investigate and, wherever practical, use non-chemical means of control unless it can be demonstrated that chemical control poses a lesser environmental risk than other practical options.
Fuel, grease, oils, paints, solvents, poisons and other potentially harmful substances will be stored in a location or manner (appropriately bunded or contained) in which inadvertent leaks will not enter watercourses, swamps or other still waters, or karst systems, either directly or indirectly.

Large quantities of chemicals should not be stocked unless they are to be used within a short period.

Unwanted chemicals should be returned to the supplier or manufacturer, or otherwise disposed of in accordance with advice from DPIWE.

Empty containers should be triple rinsed, crushed and returned to the supplier or the local council’s drumMUSTER collection site (where appropriately marked as eligible for this system), or otherwise disposed of in a manner acceptable to DPIWE.

Rinsate and leftover spray mixes should be managed in accordance with DPIWE guidelines. Refer to the Agricultural and Veterinary Chemicals section of DPIWE’s web site for a copy of these guidelines.

Equipment will be maintained in order to minimise fuel leaks.

See Section 6.11 (Waste Management) for prescriptions relating to the transport of controlled waste.

Spills will be dealt with in accordance with prescriptions provided under Section 5.8 (Spills and Emergencies).

Use of chemicals in the vicinity of watercourses and karst systems

Herbicide use along or near waterbodies will comply with the Guideline for Safe and Effective Herbicide Use near Water.

Application of chemicals will not be permitted close to karst watercourses or known cave entrances unless approved by a relevant karst specialist.

The person responsible for chemical application will ensure that chemicals do not enter waterbodies directly or indirectly, unless the chemicals are specifically approved for direct application to waterbodies.

Techniques such as wick-wiping and spot or shrouded strip application should be considered next to watercourses.

Where chemical weed control is proposed for, or adjacent to, watercourses, only chemicals specifically approved for these applications will be used.
5.8 Spills and Emergencies

GENERAL PRINCIPLES
Where an incident is likely to cause environmental harm or could potentially cause bodily harm in the workplace, then notification of a Competent or Appropriate Authority is required not more than 24 hours after the incident under the following legislation:
- Environmental Management and Pollution Control Act 1994;
- Dangerous Goods (General) Regulations 1998 (Regulation 82);
- Workplace Health and Safety Act 1995 (Section 47).

BASIC APPROACH
Spills of chemical concentrate, dangerous goods or controlled waste will be attended to promptly to reduce the risk of contaminating waterbodies and soil or affecting personnel.

Documented emergency response procedures will be used. In the absence of documented procedures, contact the Incident Response Officer.

Spills that cause or threaten to cause any environmental harm or harm to people will be reported to the Appropriate and/or Competent Authority as required under state legislation not more than 24 hours after the incident has occurred.
6 Visitor Services and Infrastructure

This section contains prescriptions to guide the design and construction of facilities and infrastructure that support management and/or public use of a reserve.

6.1 Provision of Visitor Services and Infrastructure

GENERAL PRINCIPLES

Visitors to reserves have a wide range of reasons for visiting reserves and their satisfaction partly depends on aligning their needs with the services and facilities provided.

In planning and catering for visitor facilities, it is important to ensure that the reserve’s conservation values are maintained so that visitors can continue to enjoy and appreciate them.

See Section 4 (Looking After Reserve Values) for information on managing values.

It is recognised that reserves may be an important local tourism attraction and have a significant flow-on benefit to the local community.

To optimise visitor satisfaction and to allocate infrastructure resources effectively, an understanding of visitor categories is required.

Sustainable use and balancing conflicting needs must be considered when providing facilities, and integrated into the planning process.

Visitor surveys can assist in the planning of infrastructure.

A range of recreational opportunities should be provided across a regional network of reserves.

The requirements of the Tasmanian State Coastal Policy need to be considered in planning for coastal facilities.

BASIC APPROACH

An inventory of the recreational opportunities available in the region should be kept, and any changes recorded. These opportunities should be considered in planning for reserves.

The development of facilities will be in accordance with management plans or other approved planning documents where they exist. Where they do not exist, factors of sustainable use and the need to balance conflicting needs should be considered in the planning process.

Developments should be consistent with the requirements of the Tasmanian State Coastal Policy.

The ongoing cost and resources required to maintain the facility should also be considered when assessing the need for additional facilities.

Management zones and associated facilities should be determined after identifying the reserve’s values and considering the range of recreational opportunities for reserve visitors.

Visitor surveys and the collection of statistics should be used to identify:

- annual visitor numbers including peak loading levels;
- the role the reserve plays as a visitor attraction;
- the visitor categories presently catered for;
- the distribution and abundance of visitor categories across a region’s reserves;
- the level of visitor satisfaction with the facilities currently provided;
- significant social values associated with the reserve’s local use.

See Section 4.6 (Social Values) for information on assessing social values.

6.2 Communication

GENERAL PRINCIPLES

The term ‘communication’ is used when referring to the interpretation, education and information processes undertaken to present natural and cultural values and management messages to the public. Visitor facilities such as visitor centres, picnic shelters and even toilet blocks can also...
present subtle messages about an organisation, through the design of facilities and the selection of styles, textures and finishes. See Section 6.7 (Built Structures) for further information.

A core outcome for the management of cultural heritage sites, nature conservation and land management is the presentation (including interpretation) of the values and the management issues.

Reference documents about public consultation and communication planning for activity proposals are listed in the Key Sources.

**BASIC APPROACH**

Reserve values, including significant values, sites and key places, should be presented in accordance with existing policy, interpretive plans, planning systems, statutory management plans and/or business, operational or strategic plans.

The Tasmanian Aboriginal Land Council can provide details of local Aboriginal communities who should be contacted at a preliminary planning stage where Aboriginal participation is relevant.
<table>
<thead>
<tr>
<th>Visitor segment</th>
<th>Type</th>
<th>Overall Experience</th>
<th>Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopover</td>
<td></td>
<td>Visitors stop for up to 2 hours on the way to another destination. Likely to include areas that have food/toilet facilities and short walks.</td>
<td>Good 2WD access</td>
</tr>
<tr>
<td>Day Visitors</td>
<td>Comfort</td>
<td>Visitors spend from 2 hours to a full day at the same site. Often family/social groups with group recreation activities, eg. ball games.</td>
<td>Good 2WD access. May be accessible by boats</td>
</tr>
<tr>
<td>Get away</td>
<td></td>
<td>Day Visitors spend from about 2 hours to an entire day at the same site with one specific or various nature-based activities in a natural setting. Limited facilities required.</td>
<td>Adequate 2WD or 4WD access, some water or air access</td>
</tr>
<tr>
<td>Easy Access Campers</td>
<td>Get away</td>
<td>Overnight camping in easily accessible campsites with a group of family or friends. The social aspect of the camping experience (eg. parties, group games and activities) is as important as the natural setting.</td>
<td>Adequate 2WD or 4WD, also water and air access</td>
</tr>
<tr>
<td>Solitary</td>
<td></td>
<td>Overnight camping in easily accessible campsites with a small group of family or friends. These people wish to have little or no contact with other groups.</td>
<td>Adequate 2WD, also water and air access</td>
</tr>
<tr>
<td>Bush Campers</td>
<td>Comfort</td>
<td>Overnight camping in semi-remote bush areas with some facilities provided. Low risk. Degrees of comfort vary from commercial hut-based trips to independent self-sufficient users.</td>
<td>Adequate 2WD to trackhead, also water and air access</td>
</tr>
<tr>
<td>Get away</td>
<td></td>
<td>Overnight camping in bush areas with the aid of some basic facilities. These visitors are self-reliant.</td>
<td></td>
</tr>
<tr>
<td>Remote</td>
<td></td>
<td>Overnight camping in bush areas with little or no facilities.</td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td>Projected Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carparks, toilets, picnic/bbq facilities, short walking tracks,</td>
<td>Increasing (interstate and overseas visitors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interpretive signs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picnic/bbq/toilet facilities/walking tracks/interpretive signs. Specialised</td>
<td>Increasing (interstate and overseas visitors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>facilities are required for some activities eg. boat ramps.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sites will have different requirements depending on the</td>
<td>Mostly local use therefore stable overall. Local</td>
<td></td>
<td></td>
</tr>
<tr>
<td>activities allowed and encouraged. Often facilities such as boat</td>
<td>fluctuations due to seasonal conditions, fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ramps, walker logbooks and toilets are used at the start of the day and</td>
<td>etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>then left behind as the activity is pursued in an unmodified area.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large camping areas, some powered sites, at least pit toilets or better,</td>
<td>Stable though opportunities decreasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and fresh water.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small, segregated camping areas, some powered sites, at least pit</td>
<td>Increasing (interstate and overseas visitors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>toilets or better, fresh water.</td>
<td>but limited opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities for safety and comfort are preferred, including track markers,</td>
<td>Increasing (interstate and overseas visitors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>safe bridges, huts, interpretation inside huts, enclosed toilets and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>signposts along the track. Some huts, especially those provided by guided</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tours, may have modern amenities such as showers, beds etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic facilities are required: include toilets, track markers, signposts</td>
<td>Increasing (interstate and overseas visitors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at the start of tracks, basic huts, cable bridges or log crossings over</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rivers etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None. Self-reliant.</td>
<td>Stable: mostly locals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2.1 Interpretation

GENERAL PRINCIPLES

The objective of interpretation is to enhance visitor understanding and appreciation of reserve values and promote their conservation.

Interpretation can increase public awareness of issues and foster support for reserve management practices, cultural heritage and nature conservation goals.

BASIC APPROACH

Interpretive content should aim to include and highlight aspects of the place, such as its conservation values, natural and cultural values, and past and present management issues and messages.

All communication should be consistent with the ANZECC report Best Practice in Park Interpretation and Education.

Aspects relevant to the location should be selected after consideration of the state-wide or other strategic interpretation plan where one exists.

All interpretive, educational and information signs, brochures and displays should be of a high quality and follow principles of good graphic design and readability.

The message and target audience should be clearly identified and the most appropriate method for conveying the message should be selected. Methods can include signs, brochures, face-to-face communication and the use of multi-media.

A theme or common element should flow through interpretive devices used at a particular location.

Interpretation should engage the interest of visitors and convey information in ways that do not sensationalise or trivialise aspects of the place.

Interpretation should:
- add value to the place;
- improve visitor understanding and enjoyment of the place;
- explain any conservation work undertaken or to be undertaken;
- encourage respect for cultural heritage and natural values;
- let visitors know how they can help.

Interpretation programs should include ongoing evaluation of their effectiveness. The results should be used to further develop the program.

The following should be considered in determining if a place merits interpretation:
- significance of values;
- resources expended in its conservation;
- proximity to population;
- ease of access;
- high public interest or visitor appeal;
- high cultural heritage or natural values;
- high indigenous values;
- associated visitor attractions;
- demonstrated need;
- associated tourism strategy.

Specialists should have input into the selection of places to be interpreted, and the content and the form of any presentation. This is particularly desirable with places of historic cultural significance and essential for places with Aboriginal cultural significance.

The Aboriginal community will be consulted in the selection and development of sites for interpretation of their culture. Initial contact should be through the Tasmanian Aboriginal Land Council.
Aboriginal participation should be sought at the early planning stage of relevant interpretation projects to enable the Aboriginal community to determine appropriate themes, messages, techniques and level of ongoing involvement.

Where appropriate, Aboriginal interpretation should indicate State and Commonwealth legislation relevant to the protection of Aboriginal heritage and provide an explanation of the implications for the site.

Specialist advice should be sought where the objective of an interpretation strategy is to reduce impacts on Aboriginal heritage.

6.2.2 Signs

GENERAL PRINCIPLES
The provision of signs depends on the recreational setting and the characteristics of visit types. See Section 6.1 (Provision of Visitor Services and Infrastructure) for more information.

Signs can:
- inform, direct, educate and manage visitor behaviour;
- be used to warn, regulate, orientate or interpret;
- reflect the values and expertise of the reserve management body.

The location, content and siting of a sign can enhance or diminish visitor expectations and behaviour.

BASIC APPROACH
The design, construction and installation of signs in reserves should comply with signs manuals and policies (where they exist) of the reserve management body.
Information sources include:
- Parks and Wildlife Service, Sign Manual;
- Parks and Wildlife Service, Standard Operating Procedure: Hazard Signage;

Signs located on reserve boundaries along public thoroughfares should comply with the interim Tasmanian Visitor Information System (TVIS) policy document on Tourism Information Signs in Public Road Reserves and any subsequent final policy.

Signs for specific reserve destinations on highways and major roads should meet the requirements of the TVIS policy.

New and replacement reserve signs should meet the internal standards set by the reserve management body.

A sign should only be used to communicate with visitors as a last resort, after other options have been considered.

The characteristics of the audience should be considered during the design stage.

To be effective the tone of the sign should reflect its purpose (ie. to warn, regulate, orientate or interpret).

Signs should also:
- contribute to an integrated sign system for the reserve with a consistent format adopted throughout the reserve;
- be strategically placed and kept to a minimum number;
- communicate the message clearly; and
- be positioned and designed to ensure visibility and readability.

The design of a system of signs should consider the role of each sign, individually and in relation to other signs.

Only approved pictograms developed to comply with AS 2156 Walking Tracks Part 1 Classification and Signage should be used for walking track signs.

Signs and markers on walking tracks should be appropriate to the track classification. See Section 6.5 (Non-vehicular Tracks) for information on the classification of tracks.

Signs should be periodically inspected and maintained, updated or replaced, as required, taking into account their state of repair and ongoing relevance or appropriateness.

Signs that are no longer needed should be removed, unless they have historic value.

Signs or markers will avoid attracting attention to sensitive features unless this is consistent with the protection of the features.

6.2.3 Education

GENERAL PRINCIPLES

Environmental education programs provide opportunities to learn about reserve values, threats and issues and to learn new skills and find out what can be done to help.

This can be achieved through:
- encouraging activities that have an environmental message (eg. weeding, collecting marine debris);
- promoting opportunities for educators to conduct educational activities; and
- providing suitable information for educators.

Outdoor education programs conducted in reserves aim to teach skills in various recreational activities. These opportunities should be used to promote learning about the reserve’s values.
Appropriate information, educational and interpretational materials and experiences should be offered.

Education should be considered in conjunction with Section 6.2.1 (Interpretation).

BASIC APPROACH
Education should be consistent with the ANZECC report Best Practice in Park Interpretation and Education.

Educational information and services should take into account current curriculum statements, profiles, strands and outcomes as defined by the Tasmanian Department of Education.

Educational information (both written and oral) provided by reserve managers should:
- be appropriate to the age group involved;
- provide an outline of the bigger picture when conducting activities (e.g. local/state-wide/global conservation significance of particular reserve values);
- promote classroom follow-up activities;
- make use of themes and not just provide information;
- encourage participation and involve multi-sensory activities;
- use play and learn-by-discovery methods.

Where a reserve is promoted as an outdoor classroom, educational activities should be directed so that they do not adversely affect conservation values.

Where possible, and where educational activities are likely to have an adverse effect, information should be provided to reduce the impact. This could include:
- pre-visit information (e.g. notesheets, brochures on minimal impact conduct);
- talks to user groups soon after arrival;
- as a last resort, information or interpretation signs.
The main objective of managing roads is to ensure safe and appropriate vehicular access while providing for the protection of natural and cultural values that could be degraded by the construction, upgrading or use of roads.

The following process should be adopted in planning new and upgrading existing roads in reserves:

- conservation values need to be identified and their location ascertained to minimise the effects of any planned roads;
- measures should be incorporated to minimise impacts on those values;
- where practicable, avoid road locations that would substantially affect significant reserve values;
- adopt the design standard that ensures the road will safely carry the anticipated traffic;
- fit the road to the topography so that cuttings are minimised and aesthetic values are maintained as much as possible;
- ascertain the presence of, and avoid, unstable areas such as steep narrow valleys, swamps, slip-prone areas, very erodible soils, natural drainage channels and stream sides;
- road design, construction and maintenance should aim to minimise the potential for watercourse sedimentation and turbidity;
- minimise the number of watercourse crossings;
- minimise soil exposure to lessen the potential for erosion;
- plan for dry season construction;
- consider the best equipment for the job, provide clear operator instructions and an appropriate level of supervision;
- allow for the proper consolidation of the roads before use in order to reduce maintenance.

Coastal roads and tracks should be consistent with the requirements of the Tasmanian State Coastal Policy.

The State Policy on Water Quality Management applies to the management of the effects of road drainage on water quality.

Any gravel or rock which is extracted as part of lawful earthworks/construction of the road alignment from within a road reserve is considered to be part of a road construction activity and does not require separate extractive industry approval from Council or DPIWE, nor does it require a mining lease from DIER.

The Forest Practices Code is used as the standard for road construction, quarries and borrow pits in forest reserves.

The Forest Practices Code is available at www.fpb.tas.gov.au

Prescriptions contained in these sections of the Forest Practices Code that refer to forest
6.3 Roads and Vehicular Tracks

Practices should only be adopted where the underlying principle is applicable and relevant to reserve management.

Quarrying activities (not borrow pits) associated with road construction and upgrading will be in accordance with the requirements of Section 8.5.2 (Mines and Quarries).

Planning and locating roads

Refer to Section B1 of the Forest Practices Code for prescriptions.

Additional prescriptions below should be applied where relevant.

Consultation will be in accordance with the provisions of the Code.

Planning for new roads within reserves should include an environmental and cost-benefit analysis.

Constructing or upgrading roads will be subject to the following approvals:

- Satisfactory compliance with the land management body's assessment and approval procedures;
- Written approval of the authority responsible for the road (where the authority is not the reserve manager);
- Where a new road connects with a road owned by another authority (e.g., a local council road), written approval of that authority;
- Planning approval from the relevant local council; or
- A forest practices plan if the road is in a forest reserve.

Control points, such as watercourses and saddles, should be established. These can then be used to determine an appropriate alignment, taking constraints such as terrain and gradient into account.

<table>
<thead>
<tr>
<th>Class 1 Road</th>
<th>Class 2 Road</th>
<th>Class 3 Road</th>
<th>Class 4 Road</th>
<th>Access Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>Primary road in large network</td>
<td>Significant feeder road</td>
<td>Minor road</td>
<td>Minor road or permanent track</td>
</tr>
<tr>
<td>Pavement Type</td>
<td>Surfaced, all weather</td>
<td>Surfaced, all weather</td>
<td>Surfaced, all weather</td>
<td>Unsurfaced or all weather</td>
</tr>
<tr>
<td>Pavement Width</td>
<td>5.5 – 6.0m</td>
<td>5.5m</td>
<td>3.7 – 4.0m</td>
<td>~3.0 – 3.7m</td>
</tr>
<tr>
<td>Shoulder Width</td>
<td>0.6 – 1.0m</td>
<td>0.6m</td>
<td>0.6 – 1.0m</td>
<td>&lt;0.6m</td>
</tr>
<tr>
<td>Desired Max Gradient</td>
<td>+5%, -8%</td>
<td>+8%, -10%</td>
<td>+12%, -15%</td>
<td>+15%, -15%</td>
</tr>
</tbody>
</table>

Table 6: A guide to road design (Adapted from Table 1 of the Forest Practices Code)
* Note: These standards do not apply to roads within reserves that are owned by another agency, body corporate or authority, provided the appropriate standards have been applied during the road's construction.
The visual impact of the proposed route should be minimised as far as possible by taking account of the effect of vegetation removal and soil colours (including bedrock). Removal of trees, especially rare or valued ones, should be minimised or avoided. See Section 4.2 (Flora and Fauna Values) for information on the removal of hazardous trees.

Roads should be located to avoid features of high conservation value. Specialist advice should be sought and relevant permits obtained where significant values are likely to occur and there is potential for an impact on these values. See Section 4 (Looking After Reserve Values).

In general, the road should be positioned along the contour, avoiding sudden changes in gradient. Long sections of dead-level road should also be avoided. A gradient of 1% to 5% will typically be appropriate.

In reserves declared under the National Parks and Reserves Management Act 2002, the minimum horizontal distances prescribed in Table 8 ‘Minimum Streamside Reserve Widths or Machinery Exclusion Zones’ of the Forest Practices Code for streamside/road separation will be increased by 50% where possible.

Except in an emergency situation, drainage lines will be identified and will only be crossed at a minimum number of predetermined points.

Road junctions should be at 90° where practicable, to facilitate adequate sight lines.
Potential landslip zones should be avoided. Susceptible sites include: steep slopes; slopes where there is evidence of past ground movement, such as slumping, subsidence, landslips and tree stem deformation; and slopes where there are soaks or springs. Consult with the appropriate specialist or suitably qualified consultant if there is any doubt about slope stability.

Road design
Refer to Section B2 of the Forest Practices Code for prescriptions.

Additional prescriptions below should be applied where relevant.

See Road Construction, Surfacing and Drainage below and the Forest Practices Code (page 15) for design and installation requirements to facilitate the passage of aquatic fauna.

Where a road is owned by another agency, body corporate or authority and it has had an adverse effect on reserve values, the reserve manager should negotiate with the relevant party to solve the problem, using the Code as a basis for negotiation.

Road classes specified in Table 6 should be applied to the design of new roads in reserves.

Road construction, surfacing and drainage
Refer to Section B3 of the Forest Practices Code for prescriptions.

Additional prescriptions below should be applied where relevant.

See Section 5.3 (Plant Disease Management) and the Phytophthora cinnamomi Management Manual for information on the control of P. cinnamomi.

To minimise the spread of P. cinnamomi, the importation of material should be avoided.

See Section 5.3 (Plant Disease Management) for situations that require additional caution and locations where P. cinnamomi is not likely to be a threat. This must be balanced against the need to use the optimal material. Where material is to be introduced to the site, consideration should be given to ensuring the source site is free from disease and weeds.

When planning watercourse crossings where platypus and freshwater crayfish are likely to be present, a specialist should be consulted. Technical information on culvert design and placement should also be sought.

Specialist advice should be sought when considering the replacement of existing crossings that fragment aquatic habitats.

Where practicable, all vegetation debris should be removed from the roadside and disposed of outside the reserve. Otherwise, vegetation debris should be stockpiled for mulching or, as a last resort, burning at a suitable location and time.

Road clearing will be of minimum width to reduce the extent of soil disturbance but sufficient trees should be removed to allow the road to dry and to provide adequate line of sight where roads are frequently used by the public.

See Section 4.2 (Flora and Fauna Values) and Planning and locating roads, above, for more information on removal of trees.

Surplus material should be removed from the reserve if practical or dumped in a planned, suitably located soil dump. This is particularly important where karst occurs in the reserve and where road works occur in catchments that provide drinking water.

Upgrading existing roads and access tracks
Refer to Section B4 of the Forest Practices Code for prescriptions.

Additional prescriptions, below, should be applied where relevant.

Substantial upgrading of roads is regarded as road construction for the purposes of the Code. The approach described under Section B4 of the Forest Practices Code and Road construction, surfacing and drainage, above, should be followed where practical.
Bridge, causeway and ford construction
Refer to Section B6 of the Forest Practices Code for prescriptions.

Additional prescriptions, below, should be applied where relevant.

Energy dissipaters should only be used where they do not inhibit aquatic fauna passage, but must be considered if there is insufficient natural protection against bed scour or erosion.

Straw bales should only be used as sediment traps if they have been sanitised or otherwise certified free from seed.

Class 4 roads (permanent access tracks)
Permanent access tracks (tracks) crossing high, or very highly erodible soils should be hardened or stabilised and regularly maintained. See Table 3 in Section 5.5 (Soil Conservation).

Tracks with steep gradients should only be used when the soil structure will permit positive and steady traction.

Tracks should not be used in wet conditions, except in an emergency situation, if it is obvious their use will create rutting that will cause water to bypass culverts, cross drains (grips) and natural drains.

The drainage of tracks in reserves will be guided by Table 6 'Maximum Spacing between Cross Drains on Snig Tracks' in the Forest Practices Code.

Cross drains will be constructed at approximately right angles to the water flow and have an outlet so that water discharges into the surrounding vegetation. Advantage should be taken of natural drainage points.

Rutted tracks should be restored by backfilling, but adequate drainage should be provided to prevent scour recurring.

Boggy sections should be upgraded (eg. with cording, rock or other suitable material) so that the site can be negotiated without the need to bypass it. Standing puddles should be drained and backfilled with suitable material.

The design of watercourse crossings may need specialist input where platypus and freshwater crayfish are likely to be present. Giant freshwater crayfish (Astacopsis gouldi).
Where boggy sections and/or puddles have been bypassed causing multiple tracks, bypasses should be rehabilitated following repair of the main track.

Consideration should be given to seasonal restrictions on the use of tracks in high altitude areas or where the track is particularly susceptible to damage due to saturated soils.

Tracks on vegetated dunes should be hardened if feasible. Tracks in dune areas should be carefully planned and routes marked either by fencing or with markers supported with appropriate signs. The route will be checked for Aboriginal sites and relics prior to approval.

A culvert or bridge will be installed where a stream is crossed less than 2 km upstream of a town water supply intake or where water quality downstream is otherwise of prime importance.

See Section 4.8 (Environmental Quality).

Where a stream is crossed that is known to be of importance for spawning fish or as habitat for threatened fauna species, the relevant specialist will be consulted and, if necessary, a bridge, culvert or constructed ford will be installed. Technical information on culvert design and placement should also be sought.

See Section 5.3 (Plant Disease Management) for prescriptions regarding Phytophthora cinnamomi.

Temporary access tracks
Wherever possible, existing tracks should be used for access instead of constructing new ones.

Tracks intended for short-term temporary access (eg. mineral exploration) or emergency uses (eg. fire fighting, search and rescue) will be constructed in accordance with prescriptions specified in the Code, the Mineral Exploration Code of Practice and the Forest Practices Code.

Temporary access tracks should be rehabilitated if no longer required. Earthworks will be in accordance with requirements of the Code.

Revegetation of temporary access tracks will comply with the requirements of Section 5.6 (Land Rehabilitation).

Where a nurse crop is considered, species of local provenance will be preferred. Non-local provenance nurse crops may be acceptable in some situations (eg. sterile grasses may be considered). Specialist advice should be sought before using non-provenance nurse crops, to determine their appropriateness. Rehabilitation works should incorporate suitable measures such as monitoring to ensure that these do not cause a weed problem.

If a temporary access track is likely to be required for future use (ie. but temporarily closed to on-going use), cross drains will be installed in accordance with Table 6 of the Forest Practices Code and the formation will be out-sloped to reduce scour.

Very high erodibility class soils
Roading planned for very high erodibility class soils (see Table 3 in Section 5.5) will be guided by the Roading, Restoration and Fire Control prescriptions contained in Appendices 3 and 4 of the Forest Practices Code.

Roading planned for very high erodibility class soils (see Table 3) will adhere to the requirements of Section 5.5 (Soil Conservation) of the Code.
6.4 Road Maintenance, Closure and Barriers

GENERAL PRINCIPLES

The aim of a road maintenance program is to ensure that a stable running surface and a functional drainage system are maintained. This is important for minimising erosion and sediment input into watercourses from roads.

Fire trails, and other tracks or roads that are only used infrequently or no longer used, can also contribute significantly to the sediment load of a watercourse if poorly maintained. They need to be identified and prioritised in a maintenance schedule, or permanently closed where no longer used and of no cultural significance.

Road barriers can be considered for protecting reserve values where other measures such as signs and education have not been successful in preventing illegal activities.

The closure of roads is subject to the provisions of Section 26 of the Forestry Act 1920 and Regulation 13 of the National Parks and Reserved Land Regulations 1999.

BASIC APPROACH

The location, projected use (eg. closure, maintenance or upgrading) and condition should be assessed as part of a road maintenance program. Maintenance schedules should give priority to high-use areas, sensitive areas and roads with active erosion.

The maintenance or closure of roads that are retained for infrequent management purposes or have no further use should also be included in a maintenance schedule.

The maintenance schedule should include a regular and systematic inspection and appropriate follow-up action to prevent severe erosion or failure of roads, particularly in steep country or on highly erodible soils.

In steep country, patrols should be carried out regularly and after heavy rain. As a minimum, roads should be inspected at least twice a year, in autumn and winter, in areas:
- of high and very high erodibility class soils. See Section 5.5 (Soil Conservation);
- prone to high intensity rainfall;
- within 2 km upstream of town water supply intakes;
- within susceptible domestic water supply catchments;
- of high risk, such as extended uniform grades on side slopes.

The Tasmanian Roadside Vegetation Management System (Greening Australia, Tasmania Inc.) should be used to guide roadside maintenance activities. Roadside vegetation should only be removed to the extent necessary to keep the road surface dry, to permit good visibility, and for weed and fire control purposes. Soil exposure on road verges should be kept to a minimum.

Before roads, tracks, drainage and crossing structures are replaced or removed, their cultural significance should be determined. If they are culturally significant, they should be incorporated in a maintenance schedule. See Section 4.5 (Cultural Values) for more information.

Barriers to prevent vehicle access should be appropriate for the situation and can include treated pine barriers and rocks.

Where the closure of a road is planned, the procedure described in the Policy for the Use of Recreational Vehicles on State Owned Lands should be followed.

The closure of roads should include water barring and outsloping the surface, cleaning the drains and blocking off vehicular traffic. The Forest Practices Code (Section C3.2 dot point 4 of the Basic Approach) should be used as a guide for the construction of cross drains.

In some situations, existing gravel pavements should be recovered and the road rehabilitated in accordance with the Code. See Sections 5.2 (Weed Control), 5.3 (Plant Disease Management), 5.5 (Soil Conservation) and 5.6 (Land Rehabilitation).
6.5 Non-vehicular Tracks

GENERAL PRINCIPLES
The objective of managing non-vehicular tracks is to provide, maintain and promote appropriate opportunities for a range of track-based recreation and tourism experiences, consistent with protecting the conservation values and character of the reserve.

This objective will be facilitated by measures to:
- classify tracks according to recognised track classification schemes;
- ensure that the condition of tracks and associated infrastructure conforms to the standards specified by or implicit in relevant land management zoning, reserve management plans, Australian Standards and track management strategies;
- stabilise, repair, upgrade and maintain tracks as appropriate;
- promote ecologically responsible practices by track users;
- limit unplanned track development, particularly in sensitive environments and wilderness areas;
- limit and manage incidental impacts including recreational displacement and the spread of environmental pathogens, particularly Phytophthora cinnamomi;
- maintain open and ongoing consultation on track management issues with users, commercial operators, other stakeholder organisations and the general public.

Information about the Walking Track Classification System is found in Walking Track Management Strategy for the Tasmanian Wilderness World Heritage Area.

Information sources include:

BASIC APPROACH
Planning and classification schemes
Management objectives and classifications for tracks, both existing and proposed, should be specified in the management plan and/or a track management plan for the reserve (where one exists).

Walking tracks should be classified using the six classes detailed in AS 2156 Walking Tracks Part 1 Classification and Signage.

Existing gravel pavements can be recovered and the road rehabilitated. Road rehabilitation east of Lake Paget, Central Plateau, Tasmania.
Track-based recreation and tourism experiences need to be consistent with protecting the conservation values and character of the reserve.

Tamar Conservation Area, northern Tasmania.

The Walking Track Classification System described in the Walking Track Management Strategy for the Tasmanian Wilderness World Heritage Area should be used to supplement the Australian Standard scheme where necessary.

Development of new tracks and associated infrastructure should be done in ways that minimise the environmental impacts while maximising the recreational values as far as possible.

Construction, stabilisation and infrastructure
Works on walking tracks should promote the objectives and standards for the relevant track classification.

Signs erected on tracks should, as far as resources permit, comply with AS 2156 Part 1 Classification and Signage. See Section 6.2.2 (Signs) for further information on signs.

The provision and construction of wheelchair access should comply with AS 2156 Part 2 Infrastructure Design where access is appropriate.

Existing tracks should be stabilised and repaired as far as practicable, to limit erosion, track widening, braiding and associated environmental impacts.

Ongoing maintenance of tracks and associated infrastructure should be undertaken as necessary.

Existing tracks of any classification may be relocated for environmental reasons or to improve recreational opportunities, providing relocation is consistent with reserve management objectives including the need to protect natural and cultural values.

Preference will be given to the use of local materials in track construction, stabilisation and maintenance, in so far as this is:
- practical and durable;
- compatible with the relevant classification; and
- compatible with the management objectives for the area concerned.

The cost and probability of successfully rehabilitating the section of track to become redundant should be considered.

Redundant sections of relocated tracks should be closed off and allowed to rehabilitate naturally.

Where natural rehabilitation will not or is not likely to occur then active rehabilitation should occur. See Section 5.6 (Land Rehabilitation).
6.5 Non-vehicular Tracks

Track management
Track users should be encouraged to adopt ecologically and socially responsible practices such as the Minimal Impact Bushwalking Code. Various means are available to achieve this.

See Section 6.2 (Communication) for more information.

The promotion of tracks and areas should be avoided where increased use is likely to lead to unacceptable rates of deterioration or levels of impact.

Regulation of track user numbers will be considered where this can help ensure that impacts and rates of deterioration remain within the limits specified in management plans and the relevant track classifications.

Washdown stations (facilities provided to enable walkers to wash mud from their boots and gear) and other relevant measures should be considered in areas at risk from the spread of Phytophthora cinnamomi. See Section 5.3 (Plant Disease Management) for more information.

Tracks designated for recreational purposes other than walking (e.g., horse riding, exercising dogs, cycling, mountain biking) should be clearly identified and managed to ensure that conservation values are protected. Unless special provisions are made for multiple use, designated walking tracks should be managed exclusively for walkers.

Monitoring and review
The location and condition of walking tracks should be assessed and monitored, giving priority to high use and sensitive areas.

Track assessment and monitoring programs should assess:
- the condition of track infrastructure;
- the condition of vegetation beside the track for disease symptoms; and
- the extent, degree and rates of change of track impacts including erosion depth and track width.

Tracks and associated infrastructure should be subject to regular safety inspections in accordance with Australian Standards specifications.

Walker numbers, characteristics, usage patterns, satisfaction levels and social impacts should be monitored in accordance with available resources, as far as practical.

Information gained from monitoring programs will be used to establish priorities for ongoing track management.
6.6 Air Access

GENERAL PRINCIPLES
An authority to land aircraft in, and take-off from, reserved land may be issued subject to the provisions of the National Parks and Reserved Land Regulations 1999 or the Forestry Act 1920, and/or be subject to a management plan.

Landings are normally only permitted for management and search and rescue purposes. Management activities can include:
- the identification of values;
- the protection, conservation and rehabilitation of these values;
- fire management and control; and/or
- the presentation of reserve values to the community.

A constructed landing area may be considered where it:
- meets a demonstrated need (eg. an approved tourism venture, fire suppression, rescue, construction);
- is consistent with the reserve management objectives;
- is consistent with the reserve management plan (where one exists); and
- is consistent with the requirements of the Code.

A fire risk is associated with the use of low exhaust helicopters.

The draft Environmental Protection Policy (Noise) contains helipad noise limits for new helipads in reserves managed under the National Parks and Reserves Management Act 2002 (other than the World Heritage Area).

BASIC APPROACH
A landing area should be avoided at locations where the landing area or its use could adversely affect:
- a reserve’s natural and cultural values, including areas with high potential for bird strike;
- public safety; or
- use and enjoyment of the reserve.

The strategic importance of a constructed helipad must be weighed against the relative importance of the reserve activity (eg. fire suppression, rescue, construction) in terms of:
- the reserve’s conservation significance;
- the visual impact of the site;
- noise emission considerations; and
- the impact of its construction on natural and cultural values at the proposed site.

Guidelines for Aeroplane Landing Areas (1992) define a landing area as an area of ground suitable for the conduct of take-off, landing and associated aeroplane operations under specific conditions.
The draft Environmental Protection Policy (Noise) should be used, where applicable, for the establishment of new helipads.

Permanent landing areas will be constructed and maintained to a standard consistent with their intended use and be consistent with the Guidelines for Aeroplane Landing Areas.

Temporary landing areas (eg. helipads for search and rescue, fire suppression, track work) which are no longer required should be actively rehabilitated where disturbance has inhibited natural revegetation. See Section 5.6 (Land Rehabilitation) for more information.

Where applicable, activities should be planned to minimise fire risk where low exhaust helicopters are used.

The use of aircraft for incident management will comply with the General instructions in relation to the use of aircraft in support of incident management and/or agency policy.

Aircraft use resulting in unacceptable impacts to conservation values or public enjoyment of the reserve should be addressed through negotiated overflight guidelines developed in consultation with aircraft operators.

Where required by the reserve management body, aircraft used for management purposes will comply with existing overflight guidelines, except in emergency situations or for specified management activities.

Aircraft used for management purposes will comply with conditions associated with the use of low exhaust helicopters where required by the reserve management body.

The issuing of an authority will be subject to an assessment of the activity, taking into account:

- the requirements of relevant legislation and agency policy;
- the reserve management plan or approved planning or policy document (where one exists);
- prescriptions specified in the Code; and/or
- any specific requirements pertaining to the particular activity as identified.

Conditions should be included in the authority which aim to reduce impacts on reserve values and other reserve visitors and incorporate any specific requirements as identified in the assessment process, while considering the experience sought by aerial visitors.

6.7 Built Structures

This section relates specifically to buildings and associated structures. Structures associated with access such as bridges, roads and tracks are considered in Section 6.3 (Roads and Vehicular Tracks) and Section 6.4 (Road Maintenance, Closure and Barriers). Services such as sewage systems and water supply (but not including the buildings and structures associated with them) are considered in Section 6.10 (Drinking Water Supply) and Section 6.12 (Sanitary Systems).

GENERAL PRINCIPLES

A built structure should only be considered where the need for the structure can be clearly demonstrated, and its construction and use:

- avoids unacceptable impacts to conservation values;
- meets relevant statutory requirements;
- is consistent with the reserve management objectives;
- is consistent with the management plan or other approved planning or policy document (where one exists);
- is consistent with the Code.

Developments should be consistent with the requirements of the Tasmanian State Coastal Policy, the Local Government (Building and Miscellaneous Provisions) Act 1993 and relevant Regulations, the Building Code of Australia, the Tasmanian Plumbing Code and relevant Australian Standards.
A proposed Planning Directive under the Land Use Planning and Approvals Act 1993 will provide guidance on the types of developments (in reserves managed under the National Parks and Reserves Management Act 2002) that require local government planning approval.

The Building Act 2000, which is due to commence in 2003, will replace the Local Government (Building and Miscellaneous Provisions) Act 1993 and Regulations. It will require government agencies to apply and obtain a building or plumbing permit from a Permit Authority (usually the local council) for all building and plumbing work before work is commenced.

Planning approval may be required from the relevant local council if a different use or a change in the scale of use of a site is proposed. See section 8.1 (Resource Management and Planning System).

If buildings are to be located in bushfire prone areas then the following sources of information need to be considered:

- Tasmanian Fire Service 1995, Planning Conditions and Guidelines for Subdivisions in Bushfire Prone Areas;
- Ramsay, G.C. and Dawkins, D. 1993, Building in bushfire prone areas, SAA HB 36-1993 Standards Australia, CSIRO.

BASIC APPROACH

Planning and building approvals

Relevant Acts, Regulations, Codes and Australian Standards will be adhered to.

Conservation, management and use of historic heritage will adhere to The Burra Charter and its associated guidelines.

The construction of major new facilities will be in accordance with the strategic plans and frameworks of the reserve management body, where they exist.

Design plans for built structures will be assessed and approved by a qualified person and, where necessary, council approval will be obtained prior to the calling of tenders, letting of contracts or commencement of any site works.

AS 1428.1 – 1428.2 Design for Access and Mobility will be adopted in the design of proposed developments where disabled access is required and is appropriate.

Internal assessment, approval and conditions will comply with the requirements of the Code.

An Aboriginal heritage assessment should be undertaken prior to development approval.

Where developments are likely to have an impact on an Aboriginal site, the Aboriginal community should be consulted prior to approval.

See Section 4.5 (Cultural Values) for information on the issue of permits.

A conservation policy statement or conservation plan, including a specific assessment of significance, will be submitted with development applications that involve major works, use, removal, or adaptations having an impact on historic heritage.

Proposed works and structures extending below high water mark or on unstable coastal landforms should be checked by a suitably qualified person(s) (eg. engineer, building surveyor, architect, landscape architect or environmental health officer).

A suitably qualified person(s) (eg. engineer, building surveyor, architect, landscape architect or environmental health officer) will be required to verify that completed works comply with the plans and specifications.

Consultation will be in accordance with the provisions of the Code.

The planning process should provide for relevant site rehabilitation works.

See section 5.6 Land Rehabilitation.

Location and design

A built structure must be functional, suit the needs of the user and be adequate for expected use levels.

Structures should reflect the context in which they are proposed, and harmonise with nearby facilities and the landforms, vegetative characteristics, and colours of the adjacent landscape.

Facilities should be attractive and easy to find.
The quality of design, detailing and materials should emphasise and complement adjacent structures and landscapes where these are significant or, at least, not detract from the existing character of the area in which the proposed development is to occur.

Furniture and facilities should have solid proportions and be constructed from materials that are durable.

Built structures should be designed to minimise their maintenance requirements and provide a long service life, within reasonable economic considerations and relevant site-specific considerations. Developments should use environmentally ‘best practice’ materials and technologies.

New, innovative designs will not be precluded if they are an improvement upon the effectiveness and aesthetics of conventional designs.

The scale of the existing built character should be maintained unless the existing development detracts from the natural setting of the area.

Developments should, as far as practicable, be confined to areas that have already been subject to disturbance.

Built structures should be energy efficient and non-polluting as far as possible and will not cause nuisance or hazard arising from:
- microclimatic conditions;
- excessive noise;
- odours;
- overlooking;
- overshadowing;
- visual intrusion.

The design of structures should take into account long views, both from within the structure and of the structure. Attention should be given to the silhouette of the structure (especially buildings) as well as its detail, form, texture and colour.

Building design and location should take into account measures to improve the performance of the building in the event of bushfire.
Where large frontage developments are to take place, the facade should be broken into smaller sections. Where possible, new floor levels, windows and verandahs should tie in with those existing. Buildings should be stepped down slopes to avoid skyline intrusion.

When new buildings are proposed which are adjacent to historic or visually important buildings, facades should be coordinated with existing buildings in style, scale, form and colour.

A specific site plan will be prepared for all major developments and for proposed site developments or changes that will appreciably alter existing use or character of an area.

Where the lifespan of a structure is projected to be less than 25 years, eventual removal should be taken into account at the planning stage. Design and construction methods that would allow the removal of the structure without major new impacts to conservation values should be favoured.

Construction
Construction and installation will be carried out in accordance with the relevant approvals, plans and specifications.

Construction and installation will be carried out by a suitably qualified person(s) or contractor(s).

The timing of construction works will consider seasonal factors which may enhance erosion hazards or otherwise increase the potential impact on conservation values as a result of the works.

Rehabilitation of disturbance created during construction works will be initiated as soon as practicable and be in accordance with the requirements of Section 5.6 (Land Rehabilitation).

Construction and installation works will be supervised by a suitably qualified person.

Maintenance
All built structures should be incorporated into a recurrent maintenance program in order to minimise risks to users.

Removal
The cultural value of a built structure should be assessed and considered before deciding to remove it.

Redundant built structures of no cultural significance, determined in accordance with the requirements of Section 4.5 (Cultural Values), should be removed as resources permit. Site rehabilitation should be carried out where this will promote conservation objectives.

6.8 Day-use Areas and Campsites

GENERAL PRINCIPLES
The objective of managing day-use areas and campsites is to facilitate public use and enjoyment of reserves in ways that are consistent with, and promote, the reserve management objectives.

BASIC APPROACH
A systematic planning process should precede the development or redevelopment of day-use areas and campsites. This process should aim to identify whether sites are required. If required, the appropriate locations and infrastructure should be determined, taking into account all relevant factors including:

- conservation values;
- zoning decisions in management plans and local government planning schemes;
- existing infrastructure (including outside the reserve);
- establishment and maintenance costs;
- recreational opportunities in keeping with the character of the reserve.

Ad hoc or incremental development of day-use areas and campsites should be avoided.
Consideration should be given to clearly identifying designated areas for day-use and campsites through signs or other means, unless the site is in a remote area or otherwise does not warrant a sign.

Campsites on walking tracks should be appropriate to the classification of the walking track.

See Section 6.5 (Non-vehicular Tracks) for more information.

Remote-area campsites should be classified using the campsite classification scheme currently being developed by the Parks and Wildlife Service in consultation with Forestry Tasmania. While the scheme remains under development, remote-area campsites will be managed in accordance with the management prescriptions contained in the Walking Track Classification System described in the Walking Track Management Strategy for the Tasmanian Wilderness World Heritage Area.

Infrastructure
Infrastructure to support reserve management activities, day-use areas and campsites where practicable, will be developed in accordance with the requirements of the Code and other agency policy.

See Sections 6.7 (Built Structures), 6.10 (Drinking Water Supply), 6.11 (Waste Management) and 6.12 (Sanitary Systems) for more information.

Outdoor furniture
All items of outdoor furniture should be constructed of non-abrasive, non-splintering materials with all edges and corners rounded.

Selection of materials and design of tables should be appropriate to the character of the reserve but bearing in mind that colour contrast between furniture items and the surroundings can assist visually-impaired people.
Visitor Services and Infrastructure

Where outdoor furniture is being considered, a range of table sizes and seating arrangements should be provided to cater for disabled visitors and various group sizes.

Seat heights should be appropriate to the visitor type (e.g. elderly visitors require higher seating than children).

Tables, seats and any other items that may contact human skin should be of materials that do not retain heat or cold.

Bolts, screws, nails and other fastenings should not protrude.

The top surface of seats should slope sufficiently to facilitate adequate water runoff.

Monitoring

Day-use areas and campsites should be monitored to assess (a) the condition of site infrastructure and (b) the extent, degree and rates of change of environmental impacts including number of tent sites, area of bare ground and soil erosion. This information should be used to determine management priorities at the sites. Monitoring should be prioritised in accordance with available resources, to include those areas most at risk of significant impacts.

All structures should be incorporated into a recurrent maintenance program in order to minimise risks to users.

Closure

Day-use areas and campsites should be permanently closed if the site:

- is no longer required;
- cannot be maintained without significant environmental degradation;
- is incompatible with the reserve management objectives or a management plan (where one exists);
- is otherwise inappropriate for the purposes for which it is used.

Temporary closures should be used to allow for the rehabilitation of heavily or frequently used sites.

Where a day-use area or campsite has been closed, the provision of on-site information to inform the public of the closure and the reasons for this will be considered.

Campsites that are having an impact on Aboriginal heritage should be relocated.

Day-use areas and campsites that have been closed should be rehabilitated through natural revegetation or by active management if necessary.

See Section 5.6 (Land Rehabilitation) for more information.

6.9 Shore-based and Aquatic Infrastructure

GENERAL PRINCIPLES

Shore-based and aquatic infrastructure are structures built to facilitate the use, safety or enjoyment of marine or inland waters, including a jetty, wharf, pier, dock, boat ramp, boat shed, mooring, navigation aid, etc.

The objective of managing aquatic infrastructure is to ensure that the infrastructure is safe and appropriate and will not adversely affect the reserve values and reserve management objectives.

BASIC APPROACH

Developments should be consistent with the requirements of the Tasmanian State Coastal Policy.

Shore-based and aquatic infrastructure should only be considered where the infrastructure:

- meets a demonstrated need;
- is in accordance with the reserve management objectives and the reserve management plan (where one exists);
- is consistent with the requirements of the Tasmanian State Coastal Policy;
- meets the requirements of the Code.
Shore-based and aquatic infrastructure should be avoided at locations where the infrastructure or its use could adversely affect:
- natural geomorphic process, including the erosion and deposition of sediments by wind and water;
- natural wetlands;
- threatened flora, fauna or their habitat;
- cultural values;
- other significant conservation values;
- public safety, use and enjoyment of the reserve.

Siting, design, construction and maintenance of infrastructure will be sensitive to the natural, cultural and aesthetic qualities of the coastal environment.

See Section 6.7 (Built Structures) for more information on design requirements.

Shore-based and aquatic infrastructure that is no longer required and of no historic significance should be removed and any necessary rehabilitation works carried out.

See Section 4.5 (Cultural Values).

6.10 Drinking Water Supply

GENERAL PRINCIPLES

Catchments within reserved land are often a source of drinking water. A healthy ecosystem is the best protection for a sustainable drinking water supply catchment, as it is most able to effectively absorb impacts that would otherwise affect water quality.

If the water catchment becomes affected by a deterioration in water quality caused by sediments, pathogens and turbidity, then the drinking water supply may be permanently or temporarily lost or there may be increased costs associated with treating the water.

Drinking water may be supplied to visitors where there is a demonstrated need and where the service can be installed and maintained on a sustainable basis.

BASIC APPROACH

In drinking water supply catchments, where drinking water is collected and the only treatment is chlorination, activities involving dogs and other exotic animals and/or camping should not be promoted.

The construction, installation and maintenance of toilets will be in accordance with Section 6.12 (Sanitary Systems).

In drinking water supply catchments, visitors (especially bushwalkers) should be encouraged to carry out their waste and litter in accordance with the general principles in Section 6.11 (Waste Management) and 6.12 (Sanitary Systems). See Section 6.2 (Communication) for information on communicating this message.

Mountain bikes will not be permitted in drinking water catchments.

Drinking water, where supplied, will be managed in a manner that does not pose a threat to public health.

Water supply, including reticulation and associated infrastructure, will be installed in accordance with relevant Acts, Regulations, Codes and Australian Standards. See Key Sources for a list of relevant information.

Potable water treatment and reticulation systems will be assessed and approved by a qualified engineer and, where necessary, council approval will be obtained, prior to the calling of tenders, letting of contracts or commencement of any site works.
Reserved land is often a primary source of drinking water. Lake Fenton, Mt Field National Park.

Where water is supplied that does not meet the Australian Drinking Water Guidelines, signs will be provided at the point of use advising that the water may not be suitable for human consumption without appropriate prior treatment.

Where extraction of groundwater is proposed, specialist advice should be sought regarding the sustainable level of use.

Infrastructure associated with the supply of drinking water should be incorporated into a recurrent maintenance program.

6.11 Waste Management

GENERAL PRINCIPLES

The objective of waste management is to minimise undesirable or unnecessary pollution and protect conservation values and public health by minimising waste left in reserves and ensuring it is recycled or disposed of appropriately.

Waste management options are listed in order of priority:
- waste avoidance;
- recycling/reclamation;
- waste reuse;
- waste treatment to reduce potentially degrading impacts;
- waste disposal.

The Environmental Management and Pollution Control (Waste Management) Regulations 2000 define hazardous wastes and provide for the statutory requirements for the management of waste.

BASIC APPROACH

Management of waste generated by activities in a reserve will aim firstly to reduce waste.

Waste reduction will be promoted by encouraging reserve visitors to take responsibility for the waste they generate and remove it for appropriate disposal outside the reserve when they depart. In keeping with this priority, the provision of rubbish bins and recycling receptacles for public use should be minimised.

At visitor centres, where provided, rubbish bins and recycling receptacles should be made of high quality materials and contemporary design standards should be employed.
Where rubbish bins are provided, these should be fitted with secure lids and emptied regularly. Recycling of waste should be undertaken where this is cost-effective and practicable. The provision of recycling receptacles for different materials at the collection site should be considered, to enhance efficiency in recycling.

Waste unsuitable for recycling will be disposed of at an approved waste disposal site located off the reserve. If there is no cost-effective alternative, then the waste disposal site will be managed in accordance with the conditions specified in the relevant permit issued by DPIWE.

Rubbish pits resulting from past waste disposal practices will be covered over and the site rehabilitated according to the draft Guidelines for the Rehabilitation of Refuse Disposal Sites (1996) or any subsequent edition. See Section 5.6 (Land Rehabilitation) for more information on site rehabilitation.

These sites should be monitored for waste leachate in accordance with the State Policy on Water Quality Management 1997.

Hazardous wastes will be stored and handled in accordance with the relevant statutory requirements such as the Dangerous Goods Act 1998, the Dangerous Goods (General) Regulations 1998 and the relevant Australian Standards. See Section 5.7 (Dangerous Goods and Agricultural Chemicals) for details.

Disposal of hazardous waste will only be made at licensed, appropriate waste disposal facilities, with prior treatment or neutralisation if required.

Only licensed waste transport companies (ie. holders of a current Waste Transport Business – Environment Protection Notice) will be used to transport hazardous wastes.

Where a hazardous substance has been identified, the appropriate response will be determined in consultation with officers of Environment Division, DPIWE.

Waste disposal by incineration in reserves (eg. on some islands) should only be considered as a last resort where there is no other alternative. It will be carried out at an appropriate, licensed incinerator facility approved under the Environmental Management and Pollution Control (Waste Management) Regulations 2000.

Infrastructure associated with this service should be incorporated into a recurrent maintenance program.

Spills will be dealt with in accordance with the requirements of Section 5.8 (Spills and Emergencies).

6.12 Sanitary Systems

GENERAL PRINCIPLES

Sanitary systems will be managed to protect public health and the environment by ensuring that systems are efficient, based on accepted modern technology, can cater for the projected demand and are appropriate to the environment in which they are located.

Sanitary systems are subject to a range of policies, standards and legislation. See Key Sources for a detailed list.

The provision of new facilities will comply with the State Policy on Water Quality Management.

Disposal of any sewage generated from pump-out facilities requires the use of a Waste Transport Business (licensed under the Environmental Management and Pollution Control Act 1994) approved to collect, transport and dispose of the waste for fee or reward to an approved facility. This is done under the conditions of a Waste Transport Business – Environment Protection Notice.

Hazardous wastes can include substances derived from plants, solvents, herbicides, chemicals, fuels, glues, bleaches, detergents and disinfectants.
The toilet block at the Franklin River is a completely self-contained pump-out facility.

Where an incident is likely to cause environmental harm, the Environmental Management and Pollution Control Act 1994 requires notification of appropriate authorities not more than 24 hours after the incident has occurred. Spillages will be dealt with in accordance with Section 5.8 (Spills and Emergencies).

Compliance is mandatory at all levels of on-site collection, treatment and disposal, including:
- sanitary fixtures and sanitary appliances using water-borne waste disposal;
- non-flushing sanitary fixtures;
- sanitary plumbing and drainage;
- septic tank wastewater treatment;
- aerobic wastewater treatment plants.

Commercially available (package) wastewater treatment plants, composting toilet systems, incinerating toilets etc. are required to meet standard performance requirements and to be assessed as ‘fit for purpose’ prior to being authorised for use in Tasmania.

BASIC APPROACH
Planning
Toilets and facilities to treat and dispose of wastewater should be provided where there is a demonstrated need and non-provision would pose an unacceptable risk to the environment and human health.

In areas with significant values (eg. drinking water supply catchment) or where climatic or soil conditions make the installation of on-site sanitary systems inappropriate, consideration should be given to encouraging visitors (ie. bushwalkers) to carry out their waste.

Responsible, minimal impact toilet practices should be encouraged amongst visitors.
All on-site wastewater disposal systems to be installed will conform to the following requirements:

- will not create an unreasonable risk to public health;
- will not detract from public use and enjoyment of the reserve;
- will not impinge on the natural quality of surface water or ground water, within or downstream of the reserve;
- will have operation and maintenance procedures, and be easily maintained by suitably qualified persons;
- will be designed to cater for peak flow conditions;
- will treat wastewater within the boundaries of the designated treatment site.

The evaluation of sites for wastewater disposal will be carried out by a suitably qualified person(s) such as a geotechnical engineer or environmental health officer with a demonstrated knowledge of on-site wastewater disposal systems.

A Site Evaluation Report prepared by an evaluator will be completed in accordance with the relevant Australian Standards and the Code of Practice for On-site Wastewater Disposal.

Septic disposal in sensitive ground water catchments (eg. highly permeable aquifers in karst or quaternary sands) should be avoided. Where disposal of sewage is required under these conditions, methods that do not pollute ground water will be installed. Disposal of sewage at approved facilities outside sensitive ground water catchments will be adopted where alternative disposal methods pose an unacceptable hazard to ground water quality.

Where on-site wastewater disposal is unacceptable for environmental, health or any other reason (eg. in drinking water supply catchments), the following options will be considered:

- not providing toilet facilities;
- relocating toilets to a less sensitive location;
- providing pump-out toilet facilities.

Design and specifications
The design and installation of on-site wastewater treatment plants, rising mains and associated sewerage reticulation will be undertaken by qualified professionals in this field.

Design plans for wastewater treatment systems will provide full details of the treatment system to be used.

The design and installation of on-site land application wastewater disposal systems including absorption trenches, absorption beds, evapo-transpiration-assisted beds, absorption/seepage trenches or mounds and sub-surface irrigation areas shall be undertaken in accordance with the relevant statutory requirements and Australian Standards. See Key Sources for relevant Australian Standards.

Construction and installation
Plumbing and drainage installations for wastewater treatment will be carried out by persons registered and qualified to undertake such work.

Maintenance
Personnel engaged in the management of such facilities will be required to be familiar with, and conform to, the relevant statutory requirements including occupational health and safety matters.

Sewage generated at a pump-out facility should be removed by a Waste Transport Business (licensed under the Environmental Management and Pollution Control Act 1994) to an approved facility where practical.

Sewage and effluent resulting from the treatment of sewage in reserves will not be disposed of into rivers, lakes, estuaries, natural wetlands or other inland waters.

Infrastructure associated with sanitary systems should be incorporated into a recurrent maintenance program.
Recreational Codes of Conduct

GENERAL PRINCIPLES
To guide visitors using reserves, a number of documents (listed below) have been developed with the aim of reducing the impact of visitor activities on the environment.

Brochures and booklets produced by the Tasmanian Parks and Wildlife Service include:
- Tasmania’s Wilderness World Heritage Area, Essential Bushwalking Guide and Trip Planner
- Fuel Stove Only Areas in Tasmania’s National Parks
- Tasmania’s Wilderness World Heritage Area, Notes for Anglers, Walkers and Other Visitors
- Minimal Impact Camping Means Caring
- Minimal Impact Means Bushwalking Softly
- Minimal Impact Mountain Bike Riding
- Responsible Walking Means Bushwalking Safety
- Tackling More than Trout: A guide to environmentally friendly fishing, boating and camping for inland waters
- What’s in Your Wake: A guide to environmentally friendly fishing, boating and camping for inland waters
- Horse Riding in the High Country
- Code of Practice for the Humane Shooting of Kangaroos, endorsed by the Council of Nature Conservation Ministers
- Minimal Impact Bushwalking, Bushwalking Code, produced by Environment Australia
- *Cruisin’ without Bruisin’*
- *Ride Around Tasmania!*
(*produced jointly with other organisations*)

BASIC APPROACH
Codes of conduct and minimal impact guides should be developed and promoted in conjunction with users.

They should be provided, where needed, to commercial operators to improve their clients’ understanding of reserve values and how to minimise their impact on the values.

Where codes of conduct do not exist, and an undesirable environmental impact from the activity is identified, consideration should be given to the development of an appropriate code.
8.0 Approval Processes and Statutory Powers
8.1 Resource Management and Planning System
8.2 Environment Protection and Biodiversity Conservation Act 1999 (Cwth)
8.3 Tasmanian Natural and Cultural Heritage Conservation Legislation
8.4 Reserve Management Legislation
8.5 Statutory Powers relating to Industry and Resource Use Legislation
9.0 Assessing Third Party Minor Activities
9.1 Commercial Visitor Services
9.2 Beekeeping
9.3 Agistment
9.4 Communication Transmission Towers
9.5 Harvesting of Natural Materials
9.6 Scientific Research
9.7 Hunting
This section provides an overview of approval processes and the exercise of statutory powers. See Section 8.4.2 (Exercise of Statutory Powers) for a definition. Assessment and approval processes for proposed activities vary depending on the legislation which governs the approval and conduct of the activity. Figure 1 provides a summary of legislation and State policies relevant to the assessment and approval of reserve activities.

All proposals need to be assessed so that the values and potential impacts are systematically considered. See Section 3 (Activity Assessment).

Reserve managers are required to manage reserved land, with regard to activity proposals, in accordance with the National Parks and Reserves Management Act 2002 (in particular Sections 5 and 30), Section 8 of the Crown Lands Act 1976 or Section 20(2D) and 20(3) of the Forestry Act 1920. A proposed activity can only be approved if it is consistent with relevant State and Commonwealth legislation.

### 8.1 Resource Management and Planning System


Use and development of land under the Nature Conservation Act 2002 (and managed under the National Parks and Reserves Management Act 2002) is to be subject to the Land Use Planning and Approvals Act 1993 once suitable development controls have been introduced through a planning directive. An application for a planning permit from the local council may then be required.

In the case of land reserved under the Nature Conservation Act 2002, local councils may be required to assess an application for use and development against provisions of Planning Directive No.2 once finalised.

Certain uses and developments will be exempt from requiring a planning permit under the directive. If there is any doubt as to whether an application for a permit is required, consultation with the relevant local council will be necessary.

Use and development of land under the Crown Lands Act 1976 is assessed against the relevant council's planning scheme.

Depending on the nature and size of the use and development, approval under the Environmental Management and Pollution Control Act 1994 may also be necessary.

Where building and plumbing work is proposed, reserve managers also have responsibilities under the Local Government (Buildings and Miscellaneous Provisions) Act 1993 and its relevant Regulations to obtain the necessary building and plumbing permits. All building work is required to comply with the technical requirements of the Building Code of Australia and all plumbing work with the Tasmanian Plumbing Code.

### 8.2 Environment Protection and Biodiversity Conservation Act 1999 (Cwth)

Activities may be subject to the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 where there is potential for the activity to affect a matter of national significance. Administrative Guidelines that accompany this legislation are used to work out if an activity is likely to have a significant impact on a matter of environmental significance.

A bilateral agreement between the Commonwealth and State Governments has been ratified under the Environment Protection and Biodiversity Conservation Act 1999. This means that certain activities that are likely to affect a matter of national environmental significance can be assessed by Tasmanian environmental impact assessment processes as they are considered by the Commonwealth to be adequate.
Figure 1
Approval Pathways for Reserve Activities

New activity proposed

Activity is assessed and approved via internal procedures, before proceeding through external assessment where required.

Approval through existing statutory processes as defined by Tasmanian legislation where required.

Development Approval, where required by Planning Directive No.2 of the Land Use Planning and Approvals Act 1993 (once finalised)
Local Government (Building and Miscellaneous Provisions) Act 1993 Section 64 and Regulations (to be replaced by Section 4 Building Act 2000 in 2003)
Environmental Management and Pollution Control Act 1994
Forest Practices Act 1985
Mineral Resources Development Act 1995
Living Marine Resources Management Act 1995
Marine Farm Planning Act 1995
State Policies and Projects Act 1993 (SPPA)
Water Management Act 1999

Internal procedures comply with:
National Parks and Reserves Management Act 2002
Nature Conservation Act 2002
Aboriginal Relics Act 1975
Forestry Act 1920
Historic Cultural Heritage Act 1995
Threatened Species Protection Act 1995
Tasmanian State Coastal Policy under the SPPA
State Policy on Water Quality Management 1997 under the SPPA
Environmental Protection Policies under Section 96G of the EMPCA
Local government planning schemes where relevant
Local Government (Building and Miscellaneous Provisions) Act 1993 Section 64 and Regulations (to be replaced by Section 4 Building Act 2000 in 2003)
Relevant Australian Standards

Commonwealth Ministerial approval is required where an activity is likely to have a significant impact on a matter of National Environmental Significance as defined under the Environment Protection and Biodiversity Conservation Act 1999 and it has not been approved:
by the State Government in accordance with an assessment and approval process or management plan which is the subject of a bilateral agreement under this Act; or
by another Commonwealth agency in accordance with a management plan accredited by the Commonwealth Environment Minister; or
subject to a state assessment process accredited by the Commonwealth (eg. forestry activities) under the Regional Forest Agreement.
This bilateral agreement applies to environmental assessments made under Part 3 of the State Policies and Projects Act 1993 and under Section 24, Section 25 or Section 27 of the Environmental Management and Pollution Control Act 1994.

Where an activity is likely to affect a matter of national environmental significance, the Commonwealth must be notified of the activity in order to determine if an assessment is required. It can then be determined if the activity is to be assessed using an accredited state process under the bilateral agreement. The outcome of a state assessment conducted under the bilateral agreement is forwarded to the Commonwealth and forms the basis of its decision on the activity.

8.3 Tasmanian Natural and Cultural Heritage Conservation Legislation

Activities that may affect certain natural and cultural values, may also be subject to:

- Nature Conservation Act 2002;
- Threatened Species Protection Act 1995;
- Historic Cultural Heritage Act 1995;
- Inland Fisheries Act 1995; and/or
- Aboriginal Relics Act 1975.

Authorities, permits or exemptions may be issued under this legislation. See Section 4.1 (Geodiversity), 4.2 (Flora and Fauna Values), 4.5 (Cultural Values), and 9.5 (Harvesting of Natural Materials) and 9.6 (Scientific Research) for more information on the issue of authorities.

8.4 Reserve Management Legislation

8.4.1 Objectives for the Management of Reserved Land

The Objectives for Management of Reserved Land (See Appendix 1) determine the types of activity that can be considered and authorised on particular classes of reserved land. These are specified in Schedule 1 to the National Parks and Reserves Management Act 2002, Schedule 4 to the Crown Lands Act 1976 and Schedule 3 to the Forestry Act 1920.
8.4.2 Exercise of Statutory Powers

Section 35(1) of the National Parks and Reserves Management Act 2002 states that statutory powers cannot be exercised in a national park, state reserve, nature reserve, historic site or game reserve unless authorised by a management plan approved under that Act for the land, or the power is a power under the Nature Conservation Act 2002. In this case the relevant sections of the plan are to be approved by both Houses of Parliament.

Statutory power is defined under:
1. National Parks and Reserves Management Act 2002 as:
   a) a power under an enactment [legislation] other than this Act, for one or more of the following purposes:
      the reservation or dedication of Crown land for any purpose;
      the alienation [sale or lease of], or the grant of private rights in or over, any such land;
      the carrying out of any works or other operations on any such land; and
   b) a power that, under an enactment, other than this Act, may be exercised by a public authority in relation to land vested in it.
2. Crown Lands Act 1976 as:
   having the same meaning as in the National Parks and Reserves Management Act 2002.
3. Forestry Act 1920 as:
   a power under an enactment, for the reservation or dedication of Crown land for any purpose, for the alienation of, or the grant of a private right in or over, Crown land; or for the carrying out of any works or other operations on Crown land.

The management plan needs to have regard to the purposes of reservation (specified in Schedule 1 to the Nature Conservation Act 2002) and the management objectives (specified in Schedule 1 to the National Parks and Reserves Management Act 2002). See Appendix 1.

Section 27(6) of the National Parks and Reserves Management Act 2002 states that a management plan may prohibit or restrict the exercise of statutory powers in a conservation area, nature recreation area, regional reserve, private nature reserve or private sanctuary. Statutory powers can be exercised in conservation areas, nature recreation areas and regional reserves unless the relevant authority agrees to a restriction and this is included in a management plan.

Section 12E(2) of the Crown Lands Act 1976 provides that a management plan may prohibit or restrict the exercise of a statutory power in a public reserve.

Section 22C of the Forestry Act 1920 provides that a management plan may prohibit or restrict the exercise of a statutory power in a forest reserve.

8.4.3 Statutory Powers Relating to Public Authorities

The statutory powers that can be exercised in reserves (subject to 8.4.2 above) declared under the Nature Conservation Act 2002 (ie. can be authorised in a management plan) or which can be exercised, unless prohibited or restricted, in public reserves under the Crown Lands Act 1976 or forest reserves under the Forestry Act 1920, include those conferred under the following legislation:

   Electricity Supply Industry Act 1995 – to carry out certain works on public land associated with the generation, transmission, distribution and supply of electricity and electricity infrastructure. The agreement of the land management body or owner must be sought, as it is required before such powers can be exercised in all classes of reserve (subject to 8.4.2 above).
   Roads and Jetties Act 1935 – in relation to State highways and subsidiary roads constructed and maintained by the State’s road management authority.
   Survey Coordination Act 1944 – in relation to the establishment and maintenance of existing permanent survey marks.
   Inland Fisheries Act 1995 – in relation to works or activities relating to fresh-water fish management.
8.4.4 Private Rights (Leases and Licences)
Some commercial activities by third parties on reserved land, and any third party occupancy of reserved land, require prior formal authorisation. Conditions to protect reserve values can be included in the lease or licence.

Authorisation may be issued as:
- a lease or licence, under the provisions of Sections 40 and/ or 48 of the National Parks and Reserves Management Act 2002;
- a lease or licence (Crown land or public reserve), under Section 29, 40, 42 or 45D of the Crown Lands Act 1976;
- a lease, licence or permit, subject to the provisions of Section 20(3) & (4), 20B, or 20C(3) & (7) of the Forestry Act 1920.

See Section 8.5 (Statutory Powers relating to Industry and Resource Use Legislation).

8.4.5 Granting Authority under the National Parks and Reserves Management Act 2002
Regulation 17 of the National Parks and Reserved Land Regulations 1999 makes provision for any authority required by those regulations to be taken as granted where:
- it is granted by the reserve management body;
- the relevant activity is permitted by a management plan; or
- the person is acting in accordance with a statutory power or authority conferred under a statute, subject to Sections 21(4) & 24(1) of the National Parks and Reserves Management Act 2002.

Under Regulation 18, the reserve management body or the Director (for the purposes of Reg. 6) may grant authority in relation to any reserved land in the class of conservation area, nature recreation area, regional reserve, private nature reserve or private sanctuary to a specific person. Authority may also be granted generally by means of a sign or notice in a newspaper circulating in the area in which the reserved land is situated (e.g. to permit dog-walking in a reserve).

Activities that may require authority include (but are not limited to) permitting dogs on reserved land; removing trees; driving off a formed road; carrying a licensed firearm; chainsaw or metal detector; filming; or collecting natural materials.

Under Regulation 19 of the National Parks and Reserved Land Regulations 1999, a game authority may only be granted in relation to a game reserve, conservation area or regional reserve.

Any authority may be granted subject to conditions.
8.5 Statutory Powers relating to Industry and Resource Use Legislation

Legislation that regulates industry or resource use, and the approval process associated with it, includes:

- Mineral Resources Development Act 1995 in relation to mineral exploration, mining and quarrying;
- Forest Practices Act 1985 in relation to tree removal as specified by this legislation;
- Marine Farm Planning Act 1995 and Living Marine Resources Management Act 1995 in relation to the sustainability, licensing and infrastructure of the marine aquaculture industry;
- Water Management Act 1999 in relation to the construction of dams and licensing of water off-take.

Each of these Acts confers certain statutory powers. A management plan, or in certain cases the reserve management body, may determine the extent to which these statutory powers may be exercised. See Section 8.4.2 (Exercise of Statutory Powers) for more information. Reserve managers may need to seek legal advice on a case-by-case basis to determine the application of these powers.

8.5.1 Mineral Exploration

Mineral exploration is regulated by the Mineral Resources Development Act 1995, which is administered by Mineral Resources Tasmania in the Department of Infrastructure, Energy and Resources.

The Mineral Exploration Code of Practice is an approved code of practice under the Mineral Resources Development Act 1995 and, under the RFA, is the principal code of practice for mineral exploration on certain classes of reserved land within the CAR reserve system. See Section 3 (Activity Assessment) for information on CAR values.

The parties to the RFA recognised that, subject to clauses 80, 81 and 82, mineral exploration and mining could take place in CAR reserves unless otherwise excluded.

Clause 80 states that all mineral exploration activities in the CAR reserve system will be carried out in accordance with the Mineral Exploration Code of Practice and all exploration proposals in reserves will be referred to the Mineral Exploration Working Group (MEWG) for investigation and recommendation of conditions to protect CAR values.

Clause 82 states that mineral exploration and mining activities in high quality wilderness will be managed to minimise their impact on wilderness values.

Applications for licences to undertake mineral exploration in CAR reserves are assessed by Mineral Resources Tasmania and the MEWG, with input provided by the reserve manager.

The MEWG is guided by the Mineral Exploration Code of Practice in assessing applications. Mineral Resources Tasmania generally consults with other bodies (including, foremost, PWS) with direct responsibilities for reserves, and always does so where a management plan contains such a requirement.

Under the terms of an exploration licence, all mineral exploration work is conducted in accordance with the Mineral Exploration Code of Practice.

An exploration licence can be granted subject to any conditions the Minister considers appropriate, including (but not limited to):
- conditions to minimise environmental disturbance;
- reporting requirements;
- a requirement for performance and environmental bonds.

Reserve managers may be asked to comment on proposed activities and licence conditions. The Code should be referred to when providing input into conditions for minimising environmental disturbance, impact on reserve values and land rehabilitation activities.

In particular, see Section 4.0 (Looking After Reserve Values), 5.2 (Weed Control), 5.3 (Plant Disease Management), 5.5 (Soil Conservation), 5.6 (Land Rehabilitation) and 6.3 (Roads and Vehicular Tracks).
It is intended that the Mineral Exploration Code of Practice be reviewed in parallel with this Code at five-yearly intervals with a view to maintaining consistency between the two documents.

8.5.2 Mines and Quarries

A mining or quarrying operation requires a mining lease under the Mineral Resources Development Act 1995. A planning permit may be required from the relevant local government under planning scheme provisions. A documented quarry management plan produced in accordance with the Quarry Code of Practice is required. Quarrying for management purposes (by the reserve manager) in a reserve declared under the Nature Conservation Act 2002 or the Crown Lands Act 1976 is subject to the same requirements.

The Quarry Code of Practice, which outlines the requirements and expectations for sound environmental practices and progressive rehabilitation, is the standard for the operation of quarries and borrow pits in all reserves, except forest reserves.

Where a quarry is operated on State forest (including a forest reserve) by Forestry Tasmania and the material used is exclusively for the construction and maintenance of roads (in connection with the establishment of forests or the harvesting of trees on that land), the authority of a certified forest practices plan (quarry) is required rather than a mining lease and a planning permit.

Section B5 of the Forest Practices Code provides the standard for the operation of quarries and borrow pits in forest reserves.

Where a quarry or mine is operated otherwise than above in State forest, then the following process applies.

The Minister sets the lease conditions, including the terms of any environmental bond for mining leases. Before work commences, a planning permit is also required from the appropriate local government under the Land Use Planning and Approvals Act 1993 for permissible level 1 activities. An application for a permit for such an activity is advertised so that public comment can be considered. The Board of Environmental Management and Pollution Control has the power to require a local council to refer such an application to it for assessment.

An assessment is required under the Environmental Management and Pollution Control Act 1994 for all permissible level 2 activities. This will normally be a joint assessment by the board and the local council. If a permit is granted, it may require the proponent to produce an environmental management plan and development plan. The Environment Division, DPIWE, drafts the required guidelines for the environmental management plan. The environmental management plan provides the basis for assessment, public comment and approval/permit conditions. The relevant local council officer assesses other planning matters.

In the event of an appeal arising from a decision to grant a permit, the Resource Management and Planning Appeals Tribunal determines final permit conditions. If the operation is level 2, or if DPIWE considers there is potential for a significant environmental impact, the Board of Environmental Management and Pollution Control may also impose conditions.

Approval of new quarry proposals for management purposes in reserves will only be given in exceptional circumstances.

Where an approval is given, mining and quarrying in high quality wilderness areas in reserves is managed to minimise the impact of these activities on these areas, as required by Clauses 80, 81 and 82 of the RFA.

Measures are directed at returning the site to its wilderness condition. Rehabilitation requirements aim to achieve best practice environmental management, as defined in the Environmental Management and Pollution Control Act 1994. The Code may be used to guide rehabilitation activities. See Section 5.6 (Land Rehabilitation).
8.5.3 Tree Removal or Timber Harvesting

Tree removal and/or timber harvesting is not generally permitted in a reserve and would only be considered under circumstances such as:

- salvage logging during construction of a new road;
- track, infrastructure or other approved development;
- removing trees affected by disease such as myrtle wilt;
- trees considered to be dangerous and a threat to public safety.

See Section 4.2 (Flora and Fauna Values);
- trees adversely affecting the fabric of a cultural heritage site;
- some research proposals;
- removal of plantation or exotic species such as *Pinus radiata*; or
- meeting the need for protecting significant reserve values (including fire management requirements).

The Forest Practices Act 1985 and Regulations require that any harvesting of timber or clearing of trees in excess of 1 hectare or 100 tonnes of timber (whichever is the lesser) per year, on non-vulnerable land upon any one property, be subject to a forest practices plan. This does not apply to harvesting firewood (e.g. by reserve managers for visitor use) providing heavy machinery is not used.

A forest practices plan is required for any clearing within vulnerable land, except where:

- the owner of the land gives consent; and
- clearing or harvesting trees is necessary to protect public safety (including firebreaks) or to maintain existing infrastructure such as roads, firebreaks, fences and buildings; and
- the volume of timber cleared or harvested is less than 5 tonnes, or the area of land cleared is less than 1 hectare (whichever is the lesser) on any property in one year.

A forest practices plan is not required for the harvesting of timber or the clearing of trees on land for:

- powerline easements;
- gas pipelines; or
- public roads.

It is recognised that, on some private land covered by a conservation covenant or in private sanctuaries, selective logging may still occur providing this is consistent with the covenant and management plan.

See Section 4.2 (Flora and Fauna Values) for prescriptions on the removal of dangerous trees.
8.5.4 Structures Associated with Marine Farming

Marine farming operations may have associated structures such as sheds and access roads located on reserved land (such as a conservation area or public reserve) where such activities are consistent with the Objectives for Management of Reserved Land. See Appendix 1. These operations may also utilise unallocated Crown land between the high and low water mark for structures such as pipelines and boat launching facilities. In such situations, where appropriate (eg. where values are known or likely to exist), the Code can be used to provide guidance in protecting values.

A marine farming operation requires:
- a licence to operate issued under the Living Marine Resources Management Act 1995;
- a lease for a site located in an area designated for marine farming in a Marine Farming Development Plan under the Marine Farming Planning Act 1995;
- local government planning and building approval for the land-based component of an operation (ie. marine aquaculture structures and works) which cross or are above high water mark;
- approval (in the form of a lease or a licence) to occupy land managed under the National Parks and Reserves Management Act 2002, the Crown Lands Act 1976 or the Forestry Act 1920 where infrastructure associated with the marine aquaculture industry is proposed to be located partly or completely in a reserve governed by one of those Acts;
- approval (in the form of a lease or licence) to occupy unallocated Crown land, if applicable.

A fish farm on inland waters requires a fish farming licence under the Inland Fisheries Act 1995.

8.5.5 Dam Construction and Water Supply

All dam proposals are assessed and approved under the Water Management Act 1999 except for:
- a dam that is not on a watercourse and holds less than 1 megalitre of water;
- a dam or reservoir at a mine if the Workplace Health and Safety Act 1995 applies to the dam or reservoir; or
- a dam constructed for the purpose of storing waste.

The approval of the reserve management body is required under Section 148 of the Water Management Act 1999 for dam works that encroach on reserved land, before an application for a dam proposal can be made under that Act.

Once the approval of the reserve management body has been obtained, the assessment process under the Water Management Act 1999 examines the values potentially affected and obtains, as required, input from the technical advisory committee (for dam construction) and specialists.

The Director of Environmental Management may require an application for a dam proposal to be assessed under the Environmental Management and Pollution Control Act 1994.

The impact of a dam on a reserve depends on the dam's location. For example, a dam may encroach on a reserve, be contained in a reserve or have impacts on a reserve located downstream.

An environmental impact assessment of a dam's construction and operation may be undertaken where its impact on a reserve's natural and cultural values is likely to be significant.

The right to take water for commercial, agricultural and domestic purposes is assessed as a separate, though parallel, activity from dam construction.

A water licence is required before a person can collect or store water in a dam for commercial purposes. The water allocation is assessed and the licence issued by DPIWE. An authority (ie. a lease or licence) to occupy reserved land (eg. for the use of the dam site, access road and pipelines) is also required where a dam or infrastructure may occupy reserved land.

See Section 8.4 (Reserve Management Legislation).
8.5.6 Water Off-takes

The Water Management Act 1999 requires a water licence be obtained from DPIWE in order to take water from a watercourse (including a lake) for commercial purposes. A licence is not required for non-commercial purposes such as fire fighting, stock watering and domestic purposes or for the irrigation of a household garden where the land:

- is riparian to the source;
- would be riparian to the source but for the existence of a Crown reserve not exceeding 20 metres in width between it and the source;
- would be riparian to the source but for the existence of a Crown reserve exceeding 20 metres but where under the Crown Land Act 1976 the occupier of land is permitted to take water across the reserve.

Authorities issued for taking water, usually include conditions to reduce or minimise any potential impacts on reserve values.

See Section 6.7 (Built Structures) for general guidance on the location and construction of related structures (eg. pump houses).
This section deals with the assessment of small-scale third party activities (e.g. beekeeping, agistment, scientific research). It does not address those activities that are assessed by legislation that defines an approval process. See Section 8 (Approval Processes and Statutory Requirements) for information that relates to these activities.

This section does not describe administrative procedure but aims to provide background information and, where appropriate and agreed to by the main reserve management bodies, guidelines for the assessment, permit and conduct of individual activities. Reserve managers should also refer to agency or corporate guidelines, policy and approval procedures when assessing third party minor activities.

Third party activity proposals require an adequate assessment of the potential impacts on the reserve values. This may be done as part of the statutory assessment process or the reserve management body may undertake the assessment. See Section 8 (Approval Processes and Statutory Requirements). Committees which include specialists may contribute to the assessment process.

New proposals can be considered, providing an adequate planning and assessment process is applied which adheres to legislative requirements (including any management plan) and the potential impact of the proposal on the reserve’s natural and cultural values.

Relevant administrative policy, procedures and protocols will be followed where formulated by reserve management bodies for the assessment of third party activities. Forestry Tasmania’s Occupation Rights Manual provides guidance on the issue of leases, licences and permits in forest reserves.

The issue of a lease, licence, permit or exemption by the reserve management body will be subject to an assessment of the activity, taking into account:
- the management objectives as specified in the legislation under which the land is reserved;
- the reserve management plan or approved planning or policy document (where one exists);
- the requirements of relevant legislation that provides for permits to be issued;
- policy of the land management body;
- specific requirements of an activity including the impacts that may arise from ancillary infrastructure (such as roads, powerlines and pipelines) associated with the proposed activity;
- prescriptions specified in the Code for the protection of values.

Approval for proposed activities should not be given until:
- compliance with Sections 30, 40 and 48 of the National Parks and Reserves Management Act 2002 and/or Section 8(1) and (5) of the Crown Lands Act 1976 and/or the purposes for which the reserve was created pursuant to Section 20 of the Forestry Act 1920 has been confirmed; and
- an assessment has been carried out of the potential impact on a reserve’s values and, as a minimum, this has found that the proposal complies with other relevant legislation.

Where a proposal is approved, the conditions attached to a lease, licence, permit or exemption should specify measures to reduce potential impacts and protect the reserve’s natural and cultural values.

Comment should be sought from relevant specialists prior to approval, especially where natural or cultural heritage or social values may be significantly affected.

See Section 4 (Looking After Reserve Values) and Section 5 (Protecting Reserves) for values management, protection activities and obtaining specialist advice; Section 6 (Visitor Services and Infrastructure) for standards; and Section 8 (Approval Processes and Statutory Powers) for information on approval processes.

The potential environmental impacts associated with the conduct of an activity will be brought to the attention of the proponent. Existing codes of conduct must be provided where relevant.

Authorised activities should be monitored to assess environmental impacts and compliance with relevant guidelines and conditions imposed by the authority that administers the activity and/or the reserve management body.
Where monitoring indicates environmental impacts or non-compliance, the lessee, licensee or permit-holder needs to be informed and the following options considered:

- revising the conditions and guidelines to improve their effectiveness;
- revoking or suspending the issued authority for the activity;
- prosecution in cases where non-compliance also constitutes a breach of regulations;
- ongoing monitoring requirements if the activity is permitted to continue; and/or rehabilitation of environmental impacts.

The reserve manager should also periodically assess whether conditions of the issued authority are being adhered to.

9.1 Commercial Visitor Services

A lease, licence or permit is required to undertake any commercial operation in a reserve. Large developments are subject to the requirements of the Land Use Planning and Approvals Act 1993 and may require local government planning approval.

Commercial tourism and recreation operations operating across several tenures of land (including reserves) may be assessed through a centralised arrangement.

The development of commercial infrastructure and facilities needs to be addressed through a systematic planning process that considers regional needs and issues.

Ad hoc or excessive development can detract from the aesthetic values of a reserve and hence visitors’ experience and needs to be avoided.

Where practicable, consider encouraging facilities and services to be located at sites outside a reserve. Where adequate facilities and services exist close to a reserve (i.e. visitors can access the reserve via road within a reasonable time), it is preferable to avoid similar facilities and services inside the reserve.

See Section 6.1 (Provision of Visitor Services and Infrastructure) for more information.

9.2 Beekeeping

The assessment of beekeeping on reserved land is subject to a generic management approach that considers the length of tenure and operational terms under contract, fees and participation in management decisions that have an impact on the performance of the industry.

Beekeeping in reserves is mostly confined to the Tasmanian Wilderness World Heritage Area and certain forest reserves located in the west of the State where it is subject to a management plan for the area.

The findings of any scientific studies of the impacts of introduced bees on pollination in native flora and on invertebrates and other animal species that rely on access to pollen and nectar will be taken into account in assessing beekeeping applications.

New hive sites should be confined to existing cleared areas. The hives need to be placed out of sight of roads and tracks and positioned so as to avoid interfering with the use of any track, road or highway.

The carrying capacity of a site should be determined following a field-based investigation.

Hives need to be free from infection, wood rot, disease or any other injurious matter before being brought into a reserve.

Beekeeping needs to be avoided at off-road sites where vehicular access could create new tracks or otherwise cause unacceptable impacts on the environment.

Community partnership agreements should be developed as a mechanism for working with commercial beekeepers.
Hive sites that are no longer required, or are excluded from future use on environmental or other grounds, should be rehabilitated to make good any impacts caused by the operation. Restoration of native vegetation should be undertaken where this will promote the reserve management objectives. See Section 5.6 (Land Rehabilitation) for more information on revegetation.

9.3 Agistment

An authority (often a lease) is required to undertake grazing in a reserve managed under the National Parks and Reserves Management Act 2002 and the Crown Lands Act 1976. An agistment licence is required to undertake grazing in a forest reserve.

Grazing in some reserves has a long history, has economic benefits for some farming sectors and may also provide some management benefits, eg. to provide suitable grazing for Cape Barren geese on some islands in the Furneaux Group.

As existing leases come up for renewal, conditions may need to be reviewed. An adequate environmental assessment by relevant specialists may be needed.

Continuation of grazing should be considered where it is a traditional practice that has established a pattern of use over an extended period of time and is considered to have an acceptable environmental impact. New leases and licences should only be permitted in reserves where grazing is not likely to diminish conservation values or significantly degrade soil and water resources, consistent with the State Policy on Water Quality Management 1997.

9.4 Communication Transmission Towers

Leases for communication transmission towers are issued under the Crown Lands Act 1976, the National Parks and Reserves Management Act 2002 or the Forestry Act 1920. For reserves managed under the National Parks and Reserves Management Act 2002, there may be provisions in a statutory management plan that will govern leases.

Forestry Tasmania’s Occupation Rights Manual provides guidance on the issue of leases for communication transmission tower sites in forest reserves.

Where practicable, a communication site should be located outside the reserve.

In some cases an application (eg. for a mobile phone tower site) cannot be refused under Commonwealth legislation. However, negotiating conditions of the lease, particularly with respect to location and access, can reduce the effect on reserve values and ongoing management input.

The impact of a communication site on landscape values, including those visible from vantage points outside the reserve, needs to be considered in assessing the proposal. See Section 4.3 (Landscape).

Communication sites should be constructed and maintained with due regard to the protection of the environment, including measures such as minimising the extent of clearing and impacts arising from any access track. See Section 6.3 (Roads and Vehicular Tracks).

Communication sites, other than essential navigation beacons, should be avoided in wilderness and other remote and natural areas.

A navigation beacon, in wilderness or elsewhere, should meet a demonstrated essential safety need in a regional context taking into account the management of other navigation facilities in the region.

Consider removing communication sites that are no longer required and of no historic significance. Where appropriate, the site should be rehabilitated. See Section 5.6 (Land Rehabilitation) and 4.5 (Cultural Values).

Priority should be given to the removal of surplus communication sites in wilderness and other remote and natural areas, and where they detract from landscape values.
9.5 Harvesting of Natural Materials

Provided it is sustainable and the impacts on reserve values are minimal and acceptable, wild harvesting of native seed, seed pods, flowers, kelp and leaves can potentially be permitted in:
- conservation areas and regional reserves managed under the National Parks and Reserves Management Act 2002;
- forest reserves where it is consistent with the forest reserve’s management objectives; and

However, where it is proposed that plant material be collected, then the activity is generally directed to public land outside reserves eg. production forest areas managed by Forestry Tasmania.

Commercial or recreational harvesting of plant species listed under the Threatened Species Protection Act 1995 is not permitted on any tenure of land without a permit issued under Section 71 of the Threatened Species Protection Act 1995.

Where adequate natural materials can be obtained outside the reserve system, proponents should be encouraged to operate in those areas.

An authority from the reserve management body is required for any commercial operation in a reserve and proponents are required to provide evidence from a relevant specialist that the activity is viable and sustainable.

See Section 4.2 (Flora and Fauna Values), 8.3 (Tasmanian Natural and Cultural Heritage Conservation Legislation) and 9.6 (Scientific Research) for more information on the issue of authorities.

Information sources include:

9.6 Scientific Research

Research conducted on reserved land, which involves the collection of samples and specimens, generally requires that permission be obtained from the reserve manager and that permits be issued.

The issue of authorities or permits for the collection of wildlife, plants and soil/rock specimens and samples depends on the class of reserve and the conservation status of the plant, animal or geodiversity feature involved. A permit is required on all classes of reserve for research into Aboriginal cultural heritage that is subject to the provisions of the Aboriginal Relics Act 1975.

Authorities or permits are issued under the following legislation:
- Nature Conservation Act 2002;
- Threatened Species Protection Act 1995;
- Historic Cultural Heritage Act 1995; and/or
- Aboriginal Relics Act 1975.

Authorities (or permits), particularly in relation to scientific research involving wildlife, are issued under Section 29 of the Nature Conservation Act 2002. Such authorities require the consent of the reserve management body or land owner, or may be issued subject to the consent of the reserve management body (generally the Director of Parks and Wildlife) being obtained.

Where research is conducted within a forest reserve, permission must be sought from Forestry Tasmania.

See Section 4.1 (Geodiversity), 4.2 (Flora and Fauna Values), 4.5 (Cultural Values) and 8.3 (Tasmanian Natural and Cultural Heritage Conservation Legislation) for more information on the issue of authorities.
Guidelines for the Taking and Keeping of Animals from the Wild are available from the Nature Conservation Branch. These are based on the National Health and Medical Research Council Australian Code of Practice for the Care and Use of Animals for Scientific Purposes 1997.

There is potential for research activities to cause degradation or be in conflict with other objectives of the reserve’s management.

Reporting conditions usually apply to research undertaken in reserves.

Where practical, the collection of research material should take place outside a reserve.

Generally research is not approved where research is likely to:
- unduly deplete non-renewable geodiversity;
- threaten the viability of a flora or fauna taxa or community;
- have a significant impact on a feature of biodiversity;
- not be ethical and humane;
- affect significant cultural values; or
- not be approved by an Animal Ethics Committee (with respect to vertebrate animals).

Research methodologies need to be designed to minimise the number of samples taken, and/or the level of intervention required, to satisfy the research aim.

Research involving disturbance to vertebrate fauna requires approval from an Animal Ethics Committee prior to issuing a permit to take wildlife for research purposes. The institution providing the Animal Ethics Committee approval must be licensed under the provisions of the Animal Welfare Act 1993.

Reporting conditions are normally specified on a permit in order to protect against unnecessary disturbance and damage and to provide for site rehabilitation if necessary.

9.7 Hunting

Permission to take protected wildlife is given via an authority under the National Parks and Reserves Management Act 2002, a licence or permit under the Nature Conservation Act 2002 or a licence under the Forestry Act 1920.

Hunting is permitted in certain classes of reserve, including public reserves, game reserves, conservation areas, regional reserves and certain forest reserves, providing it is safe to do so and there is no conflict of use.

Any associated activity must not adversely affect reserve values (e.g. access).
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ANZECC</td>
<td>Australia and New Zealand Environment and Conservation Council (replaced by the Natural Resource Management Ministerial Council in 2001)</td>
</tr>
<tr>
<td>AS</td>
<td>Australian Standard</td>
</tr>
<tr>
<td>CAR</td>
<td>Comprehensive, Adequate, Representative</td>
</tr>
<tr>
<td>CONSERVE</td>
<td>Forestry Tasmania's conservation database</td>
</tr>
<tr>
<td>CSIRO</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
</tr>
<tr>
<td>DIER</td>
<td>Department of Infrastructure, Energy and Resource</td>
</tr>
<tr>
<td>DPIWE</td>
<td>Department of Primary Industries, Water and Environment</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EMPCA</td>
<td>Environmental Management and Pollution Control Act 1994</td>
</tr>
<tr>
<td>EPP</td>
<td>Environmental Protection Policy</td>
</tr>
<tr>
<td>GIFT</td>
<td>Geographic information system for composing maps (Forestry Tasmania only)</td>
</tr>
<tr>
<td>GTSpot</td>
<td>Geo Temporal Species Point Observations Tasmania</td>
</tr>
<tr>
<td>HARTS</td>
<td>Habitat Assessment for Rare and Threatened Species</td>
</tr>
<tr>
<td>HAZCHEM</td>
<td>Hazardous chemical placarding system</td>
</tr>
<tr>
<td>ICOMOS</td>
<td>International Council on Monuments and Sites</td>
</tr>
<tr>
<td>IUCN</td>
<td>International Union for the Conservation of Nature (now World Conservation Union)</td>
</tr>
<tr>
<td>JANIS</td>
<td>Joint ANZECC/ MCFFA National Forest Policy Statement Implementation Subcommittee</td>
</tr>
<tr>
<td>MCFFA</td>
<td>Ministerial Council on Forestry, Fisheries and Aquaculture</td>
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<tr>
<td>MEWG</td>
<td>Mineral Exploration Working Group</td>
</tr>
<tr>
<td>MSDS</td>
<td>Material Safety Data Sheet</td>
</tr>
<tr>
<td>NOHSC</td>
<td>National Occupational Health and Safety Commission</td>
</tr>
<tr>
<td>PEV</td>
<td>Protected Environmental Value</td>
</tr>
<tr>
<td>PWS</td>
<td>Parks and Wildlife Service (Tasmania)</td>
</tr>
<tr>
<td>RFA</td>
<td>Regional Forest Agreement</td>
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<tr>
<td>RMPS</td>
<td>Resource Management and Planning System</td>
</tr>
<tr>
<td>SPPA</td>
<td>State Policies and Projects Act 1993</td>
</tr>
<tr>
<td>TVIS</td>
<td>Tasmanian Visitor Information System</td>
</tr>
<tr>
<td>WHA</td>
<td>World Heritage Area</td>
</tr>
<tr>
<td>WQO</td>
<td>Water Quality Objective</td>
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</tbody>
</table>
Activity – term used in the Tasmanian Reserve Management Code of Practice to cover existing or proposed reserve-based activities, including activities by the reserve manager (reserve management practices) and activities by reserve users carried out under an authority issued by, and with the consent of, the reserve manager. The term is considered to encompass a range of other terms to describe reserve-based activities, such as works, development, operation, practice or action.

Alien – a plant or animal thought to have been introduced by humans but now more or less naturalised.

Approved planning or policy document – a statutory management plan produced under the National Parks and Reserves Management Act 2002, a plan or other document produced under the Threatened Species Protection Act 1995; a Bushcare, Adopt-a-patch, Coastcare or Rivercare plan; weed control plan; fauna management plan, etc.

Aquatic infrastructure – a built structure to facilitate the use, safety or enjoyment of marine or inland waters, including a jetty, wharf, pier, dock, boat ramp, boat shed, mooring, navigation aid, etc.

Authorised activity – an activity permitted by a government agency following a decision to grant an authority, lease, licence, permit or exemption.

Authority (1) – a right or private right such as a lease, licence, permit or exemption issued under relevant legislation.

Authority (2) – a general term used to describe a board, committee or section of a government (local, state or federal) who has statutory responsibilities for the assessment, approval, administration and/or enforcement of third party activities.

Biodiversity – the variety of life forms: the different plants, animals and micro-organisms, the genes they contain and the ecosystems they form. It is usually considered at four levels: genetic diversity, species diversity, ecosystem diversity and community diversity (Australian Natural Heritage Charter).

Blaze – a mark chipped in the bark of a tree.

Borrow pit – a small area along a road construction line where earth/gravel may be taken for use in the construction of the road.

Built structure – a human-made construction, which can include a building, shed, hut, shelter, toilet, booth, tower, wall, barrier, platform, jetty, pump shed or other similar construction.

Bushfire – an unplanned grass, scrub or forest fire.

CAR values – conservation values as described by the National Forest Reserve Criteria embodied in the CAR (Comprehensive, Adequate, Representative) Reserve System under the RFA.

Community (1) – refers to the public in general or in some cases to a particular group of people that have interests in common, eg. the local community, Aboriginal community, the bushwalking community.

Community (2) – all the living parts of an ecosystem.

Conservation – all the processes and actions of looking after a place so as to retain its natural and cultural significance. Natural significance is interpreted in accordance with the Australian Natural Heritage Charter; cultural significance is interpreted in accordance with The Burra Charter.

Conservation values – the attributes of a place that contribute to its natural and cultural significance.

Control line – natural or constructed barrier, or treated fire edge, used in fire suppression and prescribed burning to limit the spread of fire.

Cording – the use of suitable logs, bark or vegetation to spread the weight of the load and separate vehicle tyres from direct soil contact, thus reducing ground pressure and rutting.

Cortex – a predictive modelling program which is used to identify the likely locations of a range of species using specified environmental parameters.

Cross drain – a ditch and earth bank constructed at approximately right angles to a track, preventing water from building up speed along the track and allowing redirection of running water into surrounding areas.

Degradation – reduction in the quality, integrity or viability of particular natural values of a feature, process or system, resulting from disturbances caused by human activity.

Disturbance – changes to cultural fabric or a natural feature, process or system caused by human activity, whether or not a particular value under consideration is thereby degraded.

Environmental quality – the state of the environment with respect to the quality of air, water and noise.
Glossary

Environmental weed – a terrestrial or aquatic plant, including native and introduced species, occurring outside its natural range, which can invade native vegetation and alter the ecological processes.

Erosion hazard – the susceptibility of a parcel of land to the prevailing agents of erosion. It is dependent on a combination of climate, landform, soil, land use and land management.

Existence value – the inherent qualities of a value that have no direct benefit for, and are not judged by humans.

Exotic species – species, including species that are native to the State, which occur outside their normal distribution as a result of direct, deliberate or accidental actions of humans (not including deliberate re-introductions). Exotic species include those that are not indigenous to a region but have been introduced to a site or have dispersed by their own means to other sites within the region.

Fauna management plan – management plan for individual fauna species. The scope of a Fauna Management Plan can be state-wide or restricted to a given region or population.

Feral – an animal that has escaped from primary production or domestic sources and become established in the wild.

Fire management – all activities associated with the management of fire-prone public land values, including the use of fire, to meet land management goals and objectives.

Forest practices – defined by the Forest Practices Act 1985 as ‘the processes involved in establishing forests, or growing or harvesting timber, and includes the construction of roads and other works connected with established forests, or growing or harvesting timber’. Under the Act, forest practices are required to meet standards set out in the Forest Practices Code.

Formal reserve – a reserve equivalent to IUCN Protected Area Management Categories I, II, III, IV or VI as defined by the World Commission on Protected Areas. The status of formal reserves is secure, in that revocation requires approval of the Tasmanian Parliament.

Geoconservation – the identification and conservation of geological, geomorphological and soil features, systems and processes (geodiversity) for their intrinsic, ecological or heritage values.

Geodiversity – the natural range or diversity of geological (bedrock), geomorphological (landform) and pedological (soil) features, assemblages, systems and processes. Geodiversity includes evidence for the history of the earth (evidence of past life, ecosystems and environments) and a range of processes (biological, hydrological and atmospheric) currently acting on rocks, landforms and soils. Geodiversity is synonymous with ‘geological diversity’ as defined in the Regional Forest Agreement (Land Classification) Act 1999.

Hazardous trees – (For full definition use the Forest Practices Code 2000.) Trees which are dead, have excessive defects that appear to affect their structural soundness (eg. rotten), contain dead limbs, have an excessive lean, visible root damage, a shallow root system in unstable ground or a root system that is exposed to eroding ground and/or soft soil conditions.

High quality wilderness – an area larger than 8,000 hectares having National Wilderness Inventory ratings of 12 or higher, estimated by the methodology used in the National Wilderness Inventory (Lesslie and Maslen, 1995).

Incident controller – the person having overall management of a fire in accordance with the Australian Interservice Incident Management System: Incident Control System (or its successors).

Indicative Sensitivity Rating – Sites listed in the Tasmanian Geoconservation Database are classified according to an indicative sensitivity scale. The scale reflects the potential for geoconservation values to be degraded based on differing intensities and patterns of disturbance. The scale ranges from 1 (highly sensitive) to 10 (robust).

Integrated pest management – the coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means and with the least possible hazard to the environment, people and property.

Interpretation – ‘an educational activity which aims to reveal meaning and relationships through the use of original objects, by first hand experience, and by illustrative media, rather than simply to communicate factual information’ (Freeman Tilden, Interpreting Our Heritage).

Introduced species – see Exotic, Alien and Feral species.
Glossary

JANIS Reserve Criteria - the criteria as described in the JANIS report (1997) which provide guidelines for the reservation of biodiversity, old growth forest and wilderness, taking account of reserve design and management and social and economic considerations.

Karst (karstland) - landforms resulting from the enhanced solubility of certain rock types in natural waters. Landforms typical of karst include caves, enclosed depressions (eg. sinkholes), dry valleys, sinking streams, springs and karren (small-scale solution features). Underground drainage is common. The principal karstic rock types in Tasmania are limestones and dolomites.

Key place - a site of cultural heritage significance, identified through a strategy, management plan or other planning or policy document as being suitable for interpretation and other visitor facilities.

Keystone role - where a single species or process acts as the essential part on which the whole system depends.

Lampenflora - unnatural growth of algae, moss or ferns under conditions of artificial light in show caves. Affected surfaces often have a greenish colouration. Without proper management, lampenflora can permanently damage cave features.

Landing area - area of ground suitable for the conduct of take-off and landing and associated aeroplane operations under specific conditions (Guidelines for Aeroplane Landing Areas, Civil Aviation Safety Authority 1992).

Landscape - the aesthetic and visual character of the surface features of the land, as a result of natural process, human intervention, or a combination of both.

Local provenance - refers to plant material that is collected from within the general area of a site. Seed from within 20 km and the same altitudinal range of the site will generally be considered as acceptable if closer sources are unavailable.

Maintenance - the definition of this term varies according to the different types of heritage environments, eg.

Australian Natural Heritage Charter;
Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places;
The Burra Charter.

Management objectives - the purposes for which the class of reserve to which the reserve belongs is managed under the Tasmanian Public Land Classification System. Appendix 1 lists the management objectives specified in legislation for the different classes of reserve.

Management plan - a statutory document prepared in accordance with the National Parks and Reserves Management Act 2002 (for reserves managed under that Act) or under the Forestry Act 1920 for State forest including forest reserves.

Nurse crop - consists of a rapidly growing plant species (eg. lupin) that is used to provide protection to slower growing plants in exposed situations.

Outsloped - the way a track is shaped so that the surface is sloped to shed surface water to the downhill side. A slope of 1% is recommended in the Forest Practices Code (2000).

Pathogen - an agent (usually a fungus or bacteria) that causes disease.

Planned burning - the controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity and rate of spread required to attain planned resource management objectives.

Protected object - an Aboriginal relic or object, and any part of such a relic and any object forming part of, contained within, or attached to, such a relic or object, as defined in the Aboriginal Relics Act 1975.

Protected Environmental Value (PEV) - the value or use for which it has been determined that a given area of the environment should be protected. There can and often will be more than one protected environment value for a given area. A list of potential protected environmental values is given in clause 7.1 of the State Policy on Water Quality Management.

Quarry - an extractive pit, including a gravel pit or borrow pit, from which building, construction and road-making materials (including sand, soil and clay) are obtained.

Ramsar - The Convention on Wetlands of International Importance agreed to by 18 countries in 1971 at Ramsar, Iran.

Placarding - the system of warning signs used to signal the presence of dangerous goods.
Rehabilitate – to improve the condition of degraded values so as to restore their natural and cultural significance. In relation to disturbed or degraded land: to restore to a former or proper condition or state, for example through reshaping the land surface, stabilising soil, and re-establishing vegetation.

Reserve management body – a state or local government agency, authority, trust or delegate, private person(s) or body corporate who manages reserved land or a protected area.

Reserve management practice – action or actions undertaken in the process of managing a reserve to promote the reserve management objectives.

Reserve manager – for reserves managed under the National Parks and Reserves Management Act 2002, the reserve manager is the District Manager, Senior Ranger or Ranger; for forest reserves under the Forestry Act 1920, the reserve manager is the District Forest Manager. For reserves on private land, the reserve manager is the private landholder.

Revegetation – the re-establishment of plants on an area of ground that is depleted or devoid of vegetation.

Sensitivity – the inherent susceptibility of a feature, process or system to degradation resulting from disturbances caused by human activities, irrespective of whether such disturbance is actually occurring.

Soil conservation – the prevention, mitigation or control of soil erosion and degradation through the application to land of cultural, vegetative, structural and land management measures, either singly or in combination, which enable stability and productivity to be maintained for future generations.

Soil degradation – decline in the natural quality of soil caused through its improper use by humans.

Soil erosion – the detachment and transportation of soil and its deposition at another site by wind, water or gravitational effects.

Specialist – a person who has received training, obtained appropriate qualifications from a recognised educational institution, acquired experience and demonstrated expertise in a particular branch of a profession.

Tasmanian Weed Management Strategy – a cooperative and integrated approach to weed management within a region, as recommended by WeedPlan (Tasmanian Weed Management Strategy).

Threatened species – taxon of flora or fauna that is: listed in Schedule 3, 4 or 5 of the Threatened Species Protection Act 1995; or listed under the Environment Protection and Biodiversity Conservation Act 1999 as extinct in the wild, critically endangered, endangered or vulnerable.

Threatening process – any action (including inappropriate reserve management) that poses a threat to the natural survival of any native taxon of flora or fauna, the integrity of a significant cultural value or a significant site of geoconservation.

Trackhead – the starting point for a walking track.

Vulnerability – the degree to which a feature, process or system is actually threatened with degradation due to disturbances caused by existing or likely human activities, given its inherent sensitivity.

Water craft – any craft, powered or otherwise, suitable for transportation on water, including a boat, dinghy, barge, punt, pontoon, raft, canoe, windsurfer, jet ski, float plane, etc.

Watercourse – a natural depression carrying perennial or intermittent flows of surface water for part or all of the year in most years. Consisting of a defined channel, with banks and a bed along which the water may flow.

Water Quality Objectives – for a specific waterbody, the most stringent set of water quality guidelines which should be met to achieve all of the protected environmental values nominated for that body of water.

Wilderness – land that, together with its plant and animal communities, is in a state that has not been substantially modified by, and is remote from, the influences of European settlement or is capable of being restored to such a state, is of sufficient size to make its maintenance in such a state feasible, and is capable of providing opportunities for solitude and self-reliant recreation. (Source: Tasmania-Commonwealth Joint Steering Committee, 1997).

Wilderness quality – a measure of differing levels of human impact on the natural environment, as part of a continuum of conditions varying from pristine to urban. Wilderness quality is measured in terms of four variables: remoteness from settlement, remoteness from access, apparent naturalness, and biophysical naturalness. (Source: Tasmania-Commonwealth Joint Steering Committee, 1997).
Key Sources

Web sites

ANZECC best practice documents:
www.ea.gov.au/parks then visit > best practice
Australian Natural Heritage Charter, and
handbook Protecting Natural Heritage – using
the Australian Heritage Charter are available at
www.ahc.gov.au then visit info resources > full
list of publications.
Australian Heritage Directory web site:
www.heritage.gov.au provides Listing
Statements for areas listed on the Australian
Heritage Places Inventory; key resources; links
to laws for protecting heritage places and
objects; funding options and non-government
organisations.
Australian Natural Lands and Rivers > Land
Disturbance Database (formerly the National
Wilderness Database) is found at
www.heritage.gov.au/anlr
DPIWE, Customer Service Strategy: Consultation
Framework and Guidelines and Quick Guide to
Developing a Communications Plan. Available at
the DPIWE intranet site then visit corporate
management > corporate management profile
> corporate management unit > communication
strategy (restricted site).
External databases, legislation administered by
DPIWE, slides and photos, Tasmanian EIS,
training videos:
Forest Practices Code: www.fpb.tas.gov.au
GTSpot: www.gisparks.tas.gov.au (restricted
site)
Guide to Best Fire Management Practice for
Land Managers in Tasmania:
www.sfmc.tas.gov.au
Guideline for Safe and Effective Herbicide Use
near Water and Code of Practice for Ground
Spraying are available at www.dpiwe.tas.gov.au
then visit food and agriculture > agriculture and
veterinary chemicals > codes of practice,
guidelines and information sheets.
Guidelines/Permit Applications:
www.dpiwe.tas.gov.au > parks and wildlife >
Nature of Tasmania > Plants of Tasmania
Maplink on The Geryon Server for Parks and
Wildlife Service field staff:
http://tracks.parks.tas.gov.au (restricted site)
Mineral Exploration Code of Practice:
National Occupational Health and Safety
Commission Regulatory Packages:
www.nohsc.gov.au
Quarry Code of Practice:
Resource Planning and Development
Commission: www.rpdctas.gov.au
RFA Communities are listed at the Private
Forest Reserves Program web site:
www.pfrp.tas.gov.au/program
Tasmanian Legislation: www.thelaw.tas.gov.au
Tasmanian Regional Forest Agreement:
Tasmanian State Coastal Policy is available at
www.rpdctas.gov.au then visit > State policies
> Tasmanian State Coastal Policy.
Weed Management: www.dpiwe.tas.gov.au then
visit > quarantine, pests and diseases > pests
and weeds.
Tasmanian Environmental Weed Control
Database and Weed Treatment Database for
Parks and Wildlife Service field staff: Maplink
(restricted site).
Workplace Standards web site has information
on safety and storage of chemicals, building
and plumbing matters. This can be accessed at
www.wsa.tas.gov.au

Section 2 Guiding Principles

Australian Committee for IUCN Inc. 1995, The
Richmond Communique: Principles and
Guidelines for the Management of Australia’s
World Heritage Areas, Australian Committee for
Australian Heritage Commission 2002,
Protecting Natural Heritage – using the
Australian Natural Heritage Charter, Australian
Heritage Commission (2nd edn).
Australian Heritage Commission 2003,
Australian Natural Heritage Charter: for the
conservation of places of natural heritage
significance (2nd edn).
Australia ICOMOS Inc. with the assistance of
the Australian Heritage Commission 1999, The
Australia Charter for the Conservation of Places
of Cultural Significance (The Burra Charter).
Commonwealth Department of the Arts, Sport,
the Environment, Tourism and Territories; and
the Government of Tasmania 1989, Nomination
of the Tasmanian Wilderness by the
Commonwealth of Australia for Inclusion in the
World Heritage List.
Key Sources

Department of Communication and the Arts 1997, Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places.

Section 3 Activity Assessment

Consultation
DPIWE, Customer Service Strategy: Consultation Framework and Guidelines and Quick Guide to Developing a Communications Plan. Available at the DPIWE intranet site, then visit corporate management > corporate management profile > corporate management unit > communication strategy.
Coakes, S. 1999, Consulting with communities: a policy maker's guide to consulting with communities and interest groups, Bureau of Rural Sciences, Canberra.

Section 4 Looking After Reserve Values
Geodiversity
Thorpe, V. 2003, Community Coastcare Handbook: Caring for the Coast in Tasmania,
Tasmanian Environment Centre Inc, Hobart.

Flora and Fauna Values
Forest Practices Board, Forestry Tasmania and Parks and Wildlife Service (various dates and authors) Flora of Recommended Areas for Protection and Forest Reserves in Tasmania, Hobart.
Greening Australia (Tasmania) Inc. 2001, Tasmanian Roadside Vegetation Management System, Greening Australia (Tasmania) Inc. Hobart.
Region, Tasmania, DPIWE, Hobart.
Nature Conservation Act 2002 (Tas.).
Threatened Species Protection Act 1995 (Tas.).

Dangerous Trees
Forest Practices Board, Administrative Instruction issued 9/10/01; Procedure for assessing the risk to public safety where trees are retained under the forest practices system, Hobart.

Landscape

Wilderness and Wild Rivers
Environment Australia in prep, National Wild Rivers Program, Canberra.

Cultural Values
Aboriginal Relics Act 1975 (Tas.).
Department of Communication and the Arts 1997, Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places.
Historic Cultural Heritage Act 1995 (Tas.).

Social Values

Environmental Quality

Section 5 Protecting Reserves

Fire Management
Fire Services Act 1979 (Tas).
Forestry Tasmania 2000, Using Low Intensity Fire in Land Management (rev. edn), Hobart.
Tasmanian Fire Service, Forestry Tasmania, Parks and Wildlife Service (unpublished), General instructions in relation to the use of aircraft in support of incident management.
Key sources

(October 2001)

Weed Control
DPIWE (in press), Tasmanian Washdown Guidelines for Weed and Disease Control.
Forest Health Committee 2000, Responding to Incursions: A Generic Incursion Management Plan for Forest Pests and Diseases, Standing Committee on Forestry, Canberra.

Diseases, Standing Committee on Forestry, Canberra.

Exotic Animals
Animal Farming (Registration) Act 1994 (Tas.).
Inland Fisheries Act 1995 (Tas.).
National Parks and Reserved Land Regulations 1999 (Tas.).
National Parks and Reserves Management Act 2002 (Tas.).
Nature Conservation Act 2002 (Tas.).
Vermin Destruction Act 1950 (Tas.).

Soil Conservation
various authors and dates Land Systems of Tasmania, Department of Agriculture, Hobart.

Land Rehabilitation
Department of the Environment 1994, Guidelines for the Rehabilitation of Quarries and Extractive Pits, Hobart.
DPIWE and DIER, Environment Protection, Planning and Analytical Services Division 1999, Quarry Code of Practice, Hobart.

Dangerous Goods and Agricultural Chemicals
Agricultural and Veterinary Chemicals (Control of Use) Act 1995 (Tas.).
AS 2507 - 1998 The Storage and Handling of Agricultural and Veterinary Chemicals.
Australian Dangerous Goods Code.
AS 1940 - 1993 The Storage and Handling of Flammable and Combustible Liquids.
AS 4332 - 1995 The Storage and Handling of Gases in Cylinders.
Building Code of Australia, Tasmanian Appendix, Tas. Part H120.
Dangerous Goods (General) Regulations 1998.

Section 6 Visitor Services and Infrastructure


Communication
AS 2156 - 1978 Track Markers and Information Signs for Walking Tracks.
AS 2342 Design and Use of Graphic Symbols.
AS 2899.1 - 1986 Public Information Symbol Signs - General Information Signs.
Department of Natural Resources and Environment in conjunction with Parks Victoria 1999, Best Practice in Park Interpretation and Education, a report to the ANZECC Working Group on National Park and Protected Area Management Bench-marking and Best Practice Program, by Department of Natural Resources and Environment, Victoria.
Tilden, F. 1977, Interpreting Our Heritage: principles and practices for visitor services in parks, museums and historic places (3rd edn), University of North Carolina.

Roads and Vehicular Tracks
DIER 1999, Draft Tasmanian Road Hierarchy and Targets, Hobart.
Greening Australia (Tasmania) Inc. 2001, Tasmanian Roadside Vegetation Management System, Greening Australia (Tasmania) Inc., Hobart.
Roads and Jetties Act 1935 (Tas).

Non-vehicular Tracks

Air Access
Civil Aviation Regulations 1993.
Civil Aviation Safety Authority 1992, Guidelines for Aeroplane Landing Areas, Civil Aviation Advisory Publication 92-1 (1).
Civil Aviation Safety Authority 1996, Guidelines for the Establishment and Use of Helicopter
Key sources

Landing Sites (HLS), Civil Aviation Advisory Publication 92-2 (1).
National Parks and Reserved Land Regulations 1999 (Tas.).

Built Structures
AS 1428.1 and 1428.2 Design for Access and Mobility.
Building Act 2000 (Tas.) (yet to be proclaimed).
Building Code of Australia.
Building Regulations 1994 (Tas.).
Land Use Planning and Approvals Act 1993 (Tas.).
Local Government (Building and Miscellaneous Provisions) Act 1993 (Tas.).
Parks and Wildlife Service 1996, (draft)
 Ramsay, G.C. and Dawkins, D. 1993, Building in bushfire prone areas, SAA HB 36-1993 Standards Australia, CSIRO.
Tasmanian Plumbing Code.
Plumbing Regulations 1994 (Tas.).

Drinking Water Supply
A 2070 Plastic materials for food contact use.
AS 2180 - 1986 Metal rainwater goods-selection and installation.
Local Government (Building and Miscellaneous Provisions) Act 1993 (Tas.).
Public Health Act 1997 (Tas.).
Tasmanian Plumbing Code.
Plumbing Regulations 1994 (Tas.).

Sanitary Systems
Australian Institute of Environmental Health Tasmanian Division (n.d.), Code of Practice for On-site Wastewater Disposal.
AS 1546.1 - 1546.3 1998 Septic Tank.
AS 1547 - 2000 On-site domestic wastewater management.

AS 1726 - 1993 Geotechnical site investigations.
AS 3500.2 - 1990 Sanitary plumbing and sanitary drainage.
Building Code of Australia.
Local Government (Building and Miscellaneous Provisions) Act 1993 (Tas.).
Tasmanian Plumbing Code.
Plumbing Regulations 1994 (Tas.).

Section 8 Approval Processes and Statutory Powers
Aboriginal Relics Act 1975 (Tas.).
Building Act 2000 (Tas.) (yet to be proclaimed).
Building Code of Australia.
Building Regulations 1994 (Tas.).
Crown Lands Act 1976 (Tas.).
Department of Environment 1984, Guidelines for the Rehabilitation of Quarries and Extractive Pits, Hobart.
DPIWE and DIER, Environment Protection, Planning and Analytical Services Division 1999, Quarry Code of Practice, Hobart.
Electricity Supply Industry Act 1995 (Tas.).
Environment Protection and Biodiversity Conservation Act 1999 (Cwlth).
Environmental Management and Pollution Control Act 1994 (Tas.).
Forest Practices Act 1985 (Tas.).
Forestry Act 1920 (Tas.).
Historic Cultural Heritage Act 1995 (Tas.).
Inland Fisheries Act 1995 (Tas.).
Land Use Planning and Approvals Act 1993 (Tas.).
Living Marine Resources Management Act 1995 (Tas.).
Local Government (Building and Miscellaneous Provisions) Act 1993 (Tas.).
Marine Farming Planning Act 1995 (Tas.).
Mineral Resources Development Act 1995 (Tas.).
National Health and Medical Research Council 1997, Australian Code of Practice for the Care and Use of Animals for Scientific Purposes.
National Parks and Reserved Land Regulations 1999 (Tas.).
National Parks and Reserves Management Act 2002 (Tas.).
Nature Conservation Act 2002 (Tas.).
Plumbing Regulations 1994 (Tas.).
State Policies and Projects Act 1993 (Tas.).
Tasmanian Plumbing Code.
Threatened Species Protection Act 1995 (Tas.).

Section 9 Assessing Third Party Minor Activities

Appendix

Appendix 1: Statutory Management Objectives for Reserves

National Parks and Reserves

Management Act 2002

National Park Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to encourage education based on the purpose of reservation and the natural or cultural values of the national park, or both;
- to encourage research, particularly that which furthers the purpose of reservation;
- to protect the national park against, and rehabilitate the national park following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the national park’s natural and cultural values and on assets within and adjacent to the national park;
- to encourage tourism, recreational use and enjoyment consistent with the conservation of the national park’s natural and cultural values.

Nature Reserve Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to encourage education based on the purposes of reservation and the natural or cultural values of the nature reserve, or both;
- to encourage research, particularly that which furthers the purposes of reservation;
- to protect the nature reserve against, and rehabilitate the nature reserve following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the nature reserve’s natural and cultural values and on assets within and adjacent to the nature reserve;
- to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purposes of reservation and the other management objectives.

State Reserve Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to encourage education based on the purposes of reservation and the natural or cultural values of the State reserve, or both;
- to encourage research, particularly that which furthers the purposes of reservation;
- to protect the State reserve against, and rehabilitate the State reserve following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the State reserve’s natural and cultural values and on assets within and adjacent to the State reserve;
- to encourage and provide for tourism, recreational use and enjoyment consistent with the conservation of the State reserve’s natural and cultural values.

Game Reserve Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to provide for the taking, on an ecologically sustainable basis, of designated game...
species for commercial or private purposes, or both; to encourage appropriate tourism, recreational use and enjoyment, particularly sustainable recreational hunting; to encourage education based on the purposes of reservation and the natural or cultural values of the game reserve, or both; to encourage research, particularly that which furthers the purposes of reservation; to protect the game reserve against, and rehabilitate the game reserve following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the game reserve’s natural and cultural values and on assets within and adjacent to the game reserve; to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purposes of reservation and the other management objectives.

Conservation Area Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to provide for the controlled use of natural resources including as an adjunct to utilisation of marine resources;
- to provide for exploration activities and utilisation of mineral resources;
- to provide for the taking, on an ecologically sustainable basis, of designated game species for commercial or private purposes, or both;
- to provide for commercial or industrial uses of coastal areas;
- to encourage education based on the purposes of reservation and the natural or cultural values of the conservation area, or both;
- to encourage research, particularly that which furthers the purposes of reservation;
- to protect the conservation area against, and rehabilitate the conservation area following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the conservation area’s natural and cultural values and on assets within and adjacent to the conservation area; to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purposes of reservation and the other management objectives.

Nature Recreation Area Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to encourage tourism, recreational use and enjoyment consistent with the conservation of the nature recreation area’s natural and cultural values;
- to encourage education based on the purpose of reservation and the natural or cultural values of the nature recreation area, or both;
- to encourage research, particularly that which furthers the purpose of reservation;
- to protect the nature recreation area against, and rehabilitate the nature recreation area following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the nature recreation area’s natural and cultural values and on assets within and adjacent to the nature recreation area; to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purpose of reservation and the other management objectives;
- to provide for exploration activities and utilisation of mineral resources.

Regional Reserve Management Objectives:
- to provide for mineral exploration activities and utilisation of mineral resources;
- to provide for the controlled use of other
natural resources;  
to conserve natural biological diversity;  
to conserve geological diversity;  
to preserve the quality of water and protect catchments;  
to conserve sites or areas of cultural significance;  
to encourage education based on the purposes of reservation and the natural or cultural values of the regional reserve, or both;  
to encourage research, particularly that which furthers the purposes of reservation;  
to protect the regional reserve against, and rehabilitate the regional reserve following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the regional reserve’s natural and cultural values and on assets within and adjacent to the regional reserve;  
to encourage tourism, recreational use and enjoyment consistent with the conservation of the regional reserve’s natural and cultural values;  
to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purposes of reservation and the other management objectives;  
to provide for the taking, on an ecologically sustainable basis and where appropriate, of designated game species for commercial or private purposes, or both.

Historic Site Management Objectives:

to conserve sites or areas of historic cultural significance;  
to conserve natural biological diversity;  
to conserve geological diversity;  
to preserve the quality of water and protect catchments;  
to encourage education based on the purposes of reservation and the natural or cultural values of the historic site, or both;  
to encourage research, particularly that which furthers the purposes of reservation;  
to protect the historic site against, and rehabilitate the historic site following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the historic site’s natural and cultural values and on assets within and adjacent to the historic site;  
to encourage tourism, recreational use and enjoyment consistent with the conservation of the historic site’s natural and cultural values;  
to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purposes of reservation and the other management objectives.

Private Sanctuary Management Objectives:

to conserve natural biological diversity;  
to conserve geological diversity;  
to preserve the quality of water and protect catchments;  
to conserve sites or areas of cultural significance;  
to encourage research, particularly that which furthers the purpose of reservation;  
to protect the private sanctuary against, and rehabilitate the private sanctuary following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the private sanctuary’s natural and cultural values and on assets within and adjacent to the private sanctuary.

Private Nature Reserve Management Objectives:

to conserve natural biological diversity, particularly in relation to identified species, communities or habitats;  
to conserve geological diversity;  
to preserve the quality of water and protect catchments;  
to conserve sites or areas of cultural significance;  
to encourage research, particularly that which furthers the purposes of reservation;  
to protect the private nature reserve against, and rehabilitate the private nature reserve following, adverse impacts such as those of fire, introduced species, diseases and soil erosion on the private nature reserve’s natural and cultural values and on assets within and adjacent to the private nature reserve.
Crown Lands Act 1976

Public Reserve
Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to encourage education based on the purposes of reservation and the significance of the public reserve;
- to encourage research, particularly that which furthers the purposes of reservation;
- to protect the public reserve against, and rehabilitate the public reserve following, adverse impacts of fire, introduced species, diseases and soil erosion on the public reserve’s natural and cultural values and on assets within and adjacent to the public reserve;
- to encourage tourism, recreational use and enjoyment;
- to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the purposes of reservation and other management objectives;
- to provide for the controlled use of natural resources;
- to provide for exploration activities and utilisation of mineral resources;
- to allow for private, commercial or industrial uses.

Forestry Act 1920

Forest Reserve
Management Objectives:
- to conserve natural biological diversity;
- to conserve geological diversity;
- to preserve the quality of water and protect catchments;
- to conserve sites or areas of cultural significance;
- to encourage education based on the reserve’s purpose and significance;
- to encourage research, particularly that which furthers the purpose of reservation;
- to protect the reserve against, and rehabilitate the reserve following, adverse impacts of fire, introduced species, diseases and soil erosion on the reserve’s natural and cultural values and on assets within and adjacent to the reserve;
- to encourage appropriate tourism, recreational use and enjoyment;
- to encourage cooperative management programs with Aboriginal people in areas of significance to them in a manner consistent with the reserve’s purpose and other reserve management objectives;
- to provide for the controlled use of natural resources;
- to provide for exploration activities and utilisation of mineral resources;
- to provide for the taking on an ecologically sustainable basis of designated game species for commercial and private purposes.
This, the first code of practice for reserve management, was prepared as a requirement of the Tasmanian Regional Forest Agreement 1997 with the aim of achieving consistency in the management of reserved land in Tasmania.

The Tasmanian Reserve Management Code of Practice 2003 is an essential tool for reserve managers as it provides the most recent information available on management practices, legislation, codes of practice, essential standards and useful sources of information.