

BACKGROUND DOCUMENT 2

Processes and Planning Tools to Meet Objectives and Requirements of the Biodiversity Provisions of Tasmania's Forest Practices System



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for the
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The document was commissioned by the Biodiversity Expert Review Panel (BERP), with the consultant's brief outlined as at Appendix A.

Disclaimers

The information presented is a broad overview of information considered relevant (by the author) to the brief.

Analysis and discussion of information has been undertaken to different levels of detail.

Coverage of material related to all aspects of the brief may not be complete.

The opinions and interpretations of legislation and policy expressed in this document are made by the author and do not necessarily reflect those of the BERP.

SUMMARY

The forest practices system includes numerous provisions for the management of biodiversity values.

The *Forest Practices Code* is the key policy instrument for identifying biodiversity values and providing provisions for management of such values. Values are identified using a range of planning tools such as the *Threatened Fauna Manual*, *Forest Botany Manual* and threatened species databases. Management is achieved through Forest Practices Plans that incorporate specialist advice delivered through consultation with specialists of the Forest Practices Authority (through an evaluation and notification procedure) and reference to other documents such as the *Threatened Fauna Adviser*, technical notes and web-based resources.

Whilst policy documents make distinctions between public and private land the Forest Practices System is effectively 'tenure blind'. The Code prescribes virtually the same management advice on private and public land in relation to threatened flora and fauna, vegetation types and related biodiversity issues (e.g. pests and diseases).

There are some specific policy mechanisms related to the management of threatened species, the most important of these being the "procedures for the management of threatened species in wood production forests under the forest practices system", which establish an interdepartmental protocol for ensuring threatened species are catered for under the forest practices system.

Many of the broad objectives of international and national biodiversity policy instruments are not explicitly met by the forest practices system (e.g. through a formal agreement) but many are met through implicit means (e.g. Commonwealth and State legislation designed to meet the broad objectives and/or provisions in policy instruments such as the *Forest Practices Code*).

Objectives for biodiversity management included in State legislation and policies are met by various mechanisms within the forest practices system, most notably the *Forest Practices Code* and associated planning tools, interdepartmental agreements and specific provisions of the Code such as the duty of care policy.

Introduction

This is the second background document prepared by the consultant addressing the terms of reference of the review of the biodiversity provisions of the forest practices system. The first document provided information on the role of the forest practices system in the overall approach to the maintenance of biodiversity in the State, summarising the legislative and policy context.

The present document delves deeper into various policy instruments, specifically addressing 2a and 2c of the terms of reference, which are stated as:

2. Review the relevance and scope of the Forest Practices System in relation to biodiversity conservation and evaluate the ability of existing provisions to meet conservation objectives at the local, catchment and regional scales. In particular consider:

(a) Processes and planning tools to meet objectives and requirements of the RFA, Tasmanian Nature Conservation Strategy, Threatened Species Strategy, Threatened Species Recovery Plans, Tasmanian *Threatened Species Protection Act, 1995* and other relevant National and State legislation and policies.

(c) Processes and planning tools for facilitating legislative responsibilities amongst agencies (e.g. interagency agreed procedures).

While the two subcategories of TOR 2 are listed above as separate items, this document does not distinguish between the two.

The present document should be read in conjunction with the first document, although the relevant wording of various policy instruments is repeated in the present document such that it can be read in isolation.

The first background document indicated that Tasmania has international and national obligations in relation to the management of biodiversity through such policy instruments as: *Convention on Biological Diversity 1993, National Forest Policy Statement 1992, National Strategy for the Conservation of Australia's Biological Diversity 1993, National Objectives and Targets for Biodiversity Conservation 2001-2005, National Strategy for Ecologically Sustainable Development, Regional Forest Agreement, Community Forest Agreement, Regional Forest Agreements Act 2002, Regional Forest Agreement (Land Classification) Act 1998, Environment Protection and Biodiversity Conservation Act 1999, A National Approach to Firewood Collection and Use in Australia, National Action Plan for Salinity and Water Quality and Convention on Wetlands (Ramsar)*. Most of these instruments have broad objectives that use terminology such as "improve..." and do not provide specific actions so they are not discussed further. The main documents discussed from the above list are the *Regional Forest Agreement* (and associated instruments) and the *Environment Protection and Biodiversity Conservation Act 1999*.

The focus of this document is on State-based policy instruments.

The document is divided into sections on threatened species, priority species, vegetation types and other biodiversity issues.

Threatened species

Definitions

Threatened species comprise an important and (relatively) easily definable subset of biodiversity. There are specific policy instruments related to the management of threatened species under the forest practices system.

For the purpose of this document, threatened species are defined as species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Priority species, as defined by the *Regional Forest Agreement*, are discussed separately.

Virtually all species listed on the EPBCA are also listed on the TSPA, the exceptions being some plants (such as *Carex tasmanica* and some others of dubious taxonomic status). In contrast, there are many species listed on the TSPA that are not listed on the EPBCA. Some species are not threatened at a national level (e.g. non-endemic species). Others do not meet the criteria for listing on the EPBCA because while they meet the criteria for rare (schedule 5) on the TSPA, they are not sufficiently threatened to meet the lowest threat schedule (vulnerable) on the EPBCA (e.g. many endemic and non-endemic species with restricted distributions). There are also several species listed on the TSPA that are likely to qualify for the EPBCA but are awaiting nomination (e.g. many short-range endemic species), some of which will be undertaken as part of the current SPRAT¹ process (an alignment of the TSPA and EPBCA being undertaken by DPIW with DEH funding).

For a discussion of the mechanisms for meeting the objectives of the EPBCA under the forest practices system, see the previous background document. For easy reference, the relevant section of that document has been provided at Appendix C of the present document.

What are the objectives of the TSPA?

Schedule 1 (Part 2) of the TSPA states the broad objectives of the Act, specifically the objectives of the Threatened Species Protection System, as follows (note that Part 1 of Schedule 1 of the TSPA restates the Resource Management and Planning System, which are cited later in this document):

3. The objectives of the threatened species protection system established by this Act are, in support of the objectives specified in Part 1 of this Schedule –
 - (a) to ensure that all native flora and fauna in Tasmania can survive, flourish and retain their potential for evolutionary development in the wild; and
 - (b) to ensure that the genetic diversity of native flora and fauna is maintained; and
 - (c) to educate the community in the conservation of native flora and fauna; and
 - (d) to encourage co-operative management of native flora and fauna including the making of co-operative agreements for land management under this Act; and

¹ The SPRAT process mentioned is an abbreviation for Species Profile And Threats database, a project of the Commonwealth Department of Environment and Water Resources. State governments are funded by the Commonwealth to prepare species' profiles for species listed on the EPBCA or the TSPA, essentially using a template based on the nomination form for the EPBCA. The process is designed to align the State and Commonwealth Acts so the focus is on species currently listed on the Acts but at different levels (e.g. on the EPBCA as CR and the TSPA as V) and State-endemic species currently listed only on the TSPA. The process aims to "fast track" the nomination and listing process.

- (e) to assist landholders to enable native flora and fauna to be conserved; and
- (f) to encourage the conserving of native flora and fauna through co-operative community endeavours.

How are the objectives of the TSPA met under the forest practices system?

The *Forest Practices Code*, established under the *Tasmanian Forest Practices Act 1985*, is the primary mechanism for meeting the objectives of the TSPA under the forest practices system.

The Code contains numerous provisions related to the management of threatened species (most often threatened aquatic fauna) but these are not detailed here (there are essentially cross-referenced in Section D of the Code, which is discussed below).

The Code contains some broad statements on the requirements to manage threatened species (copied below directly from the Code).

A1. Tasmania's Forest Practices System

Tasmania is endowed with extensive forest resources. These forests contain natural, cultural and economic values which will be managed in a sustainable manner to optimise the benefit to current and future generations. Good forest management entails protection of natural and cultural values during forest operations, and proper reforestation where areas are to be reforested. The *Forest Practices Act 1985* was passed to ensure that forest operations are conducted in an environmentally acceptable manner on public and private forest lands. The Act forms part of a broader legislative and policy framework that provides the basis for sustainable forest management in Tasmania.

A2. The Forest Practices Code

The *Forest Practices Act 1985* provides that the Forest Practices Code shall prescribe the manner in which forest practices are to be conducted so as to provide reasonable protection to the environment. The Code is issued by the Forest Practices Board, after extensive consultation and public comment.

The Code provides a practical set of guidelines and standards for the protection of environmental values during forest operations, in particular:

soils water quality and flow geomorphology flora, fauna, genetic resources
visual landscape cultural heritage.

These statements are general in nature and do not make direct reference to the TSPA except in broad terms ("...forms part of a broader legislative and policy framework...").

Section D of the Code is the main section specifically detailing the management of threatened species, and this is discussed in detail below.

General Principles

The forest practices system contributes to the conservation of natural and cultural values at State and regional levels. Such values can occur in forest and non-forest environments.

Conservation of environmental diversity (biodiversity, including flora, fauna, **threatened species**, and genetic resources; landscape; cultural heritage; and geodiversity, including soils and landforms;) will be principally catered for in a systematic reserve system on public land, by a voluntary private land reserve system, and by management prescriptions in production forests.

Natural and cultural values in adjacent reserves should be considered during the planning and conducting of forest operations.

Management of natural and cultural values should be integrated where possible.

Resource manuals and other available information on flora, fauna, **threatened species**, cultural heritage, geomorphology, landscape and soils will be consulted where appropriate.

The main provisions dealing with the conservation of natural and cultural values are detailed below. Numerous other provisions in this Code affect these values, but have not been repeated in this section.

Measures taken to conserve natural and cultural values will be consistent with effective fire management, silvicultural practices and safety requirements.

While the General Principle type of statements in the Code are broad, the ones detailed above specifically refer to threatened species (**bold underlined emphasis added**).

Section D of the Code also provides some Basic Approach type statement relevant to the management of threatened species.

Basic Approach

Natural and cultural values should be assessed at the strategic or property level, and will be evaluated during the preparation of Forest Practices Plans.

Requirements for the conservation of natural and cultural values, including specific sites, should be recorded to aid in future decision making and ensure continuity of management.

Areas of high conservation significance may be designated as special management zones where there is agreement with the landowner. Forestry operations in special management zones will comply with the agreed management recommendations to ensure maintenance of natural and cultural values. Advice should be sought from an appropriate specialist before conducting any forest operations.

The sustainable management of natural and cultural values within production forests under the forest practices system will be determined in accordance with:

- relevant legislation, including the *National Parks and Wildlife Act 1970*, **Threatened Species Protection Act 1995**, *Aboriginal Relics Act 1975*, *Forestry Act 1920*, **Commonwealth Environment Protection and Biodiversity Conservation Act 1999**, and State Policies;
- the Tasmanian Regional Forest Agreement 1997 (including the provisions for the Comprehensive Adequate and Representative reserve system);
- the policy for maintaining a Permanent Forest Estate;
- policy mechanisms that relate to State forest;
- the duty of care of landowners under the provisions of this Code, which is defined as the fundamental contribution of the landowner to the conservation of natural and cultural values that are deemed to be significant under the forest practices system. The landowners duty of care includes: all measures that are necessary to protect soil and water values as detailed in this Code; the reservation of other significant natural and cultural values. This will be at a level of up to 5% of the existing and proposed forest on the property for areas totally excluded from operations. In circumstances where partial harvesting of the reserve area is compatible with the protection of the values, the level will be up to 10%. The conservation of values beyond the duty of care is deemed to be for the community benefit and should be achieved on a voluntary basis or through compensation mechanisms where available.

This section of the Code provides a direct link to the TSPA and EPBC.

Section D3 of the FPC deals specifically with the management of flora and fauna. The entire section (*sans* images) is copied below (with mention of threatened species highlighted by **bold underlined type**).

General Principles

Conservation of flora and fauna is assisted by the maintenance and restoration of habitat, the enhancement of opportunities for recolonisation of disturbed areas, and the linking of forest areas to allow genetic interchange.

Maintenance of the genetic resources of native forest is assisted by the retention of native flora and fauna in formal and informal reserves including wildlife habitat strips and streamside reserves dispersed throughout the forest, and the use of seed sources native to

the site when regenerating forests. Generally, retention of forest with oldgrowth characteristics is preferable to retention of regrowth of the same forest type.

Basic Approach

Planning for flora and fauna conservation should initially be carried out at a regional level (e.g. whole property, forest block or district forest management plan). At this level:

- strategies should be developed to maintain species diversity, particularly in extensive plantation areas and other intensively managed areas;
- dispersed coupes should be considered;
- management agreements should be considered between the landholder and DPIWE for threatened species, particularly those with a restricted range.

As far as practicable, areas of retained vegetation (including wildlife habitat strips – see page 62) should include localised features associated with:

– **threatened species:**

- species with disjunct or unusual distributions;
- sites with high species diversity;
- inadequately reserved communities;
- forests that have oldgrowth characteristics;
- other significant biological values (e.g. important research sites).

In parts of the State where native forests occur mainly as remnants, consideration will be given to:

- retention of native forest remnants to aid in the maintenance of local flora and fauna diversity and landscape values;
- restoration of habitat including widening and linking wildlife habitat strips, particularly where species and communities of high conservation significance are known to occur.

D3.1 Flora Conservation

General Principle

The general requirements and guidelines for conservation of significant flora values are outlined in the *Forest Botany Manuals*. Other sources of information include vegetation maps, the flora databases held by Forestry Tasmania and DPIWE and advice from specialists.

Disturbance to native vegetation in localised environments (such as rocky knolls, swamps, heaths, and streambanks) should be avoided or minimised. These environments are associated with plant communities and **species with a priority for conservation**, and are important in maintaining diversity at a local level.

Basic Approach

Planning and Assessment

See also Section D3 above.

Planning for broad areas of forest will require the consideration of the conservation requirements of plant communities and species, maintenance of values in formal and informal reserves, and other flora-related issues.

During the preparation of a Forest Practices Plan the proposed operational area will be assessed to determine:

- the plant communities present;
- whether **threatened plant species** are known or likely to occur;
- whether other significant flora values are known or likely to occur.

Site Management for Flora in Native Forests

Vegetation that is susceptible to *Phytophthora cinnamomi* (e.g. swamps, heaths, sedgeland, dry lowland forest on sandy or poorly drained sites, and low altitude rainforest

on infertile sites), should be protected from accidental infection by the fungus by the implementation of hygiene measures.

Patches of myrtle or rainforest that are to be retained should be protected from fire, damage and disease (notably myrtle wilt). This may require buffering of some patches (e.g. by extending streamside reserves) and avoiding or minimising damage during road construction or maintenance (see page 13).

Measures should be taken to ensure exotic weed species, (e.g. pampas grass, ragwort, blackberry and Spanish heath), do not become established in native forest, particularly reserves. Native forest most at risk includes areas adjoining plantations, and drier forest types in general. Machinery should be washed down before being transported from one area to another, particularly when moving from infested to uninfested areas.

Consideration should be given to the protection (e.g. by buffering) of native forests, particularly reserves, from incursion by adjoining plantation species. For example, dry forests may be invaded by radiata pine, and some planted eucalypts may hybridise with related species in adjacent native forest.

Disturbance to localised environments rich in epiphytic species should be avoided or minimised, particularly in drier parts of Tasmania. Such environments include relict or oldgrowth rainforest, dense patches of musk or manferns and sheltered boulderfaces. If possible, trees should not be felled into or yarded across these environments, partly to reduce the volume of slash and consequently the intensity of regeneration burns. Epiphytic species will recover most rapidly on sites which are not subjected to high intensity burning.

D3.2. Fauna Conservation

General Principles

Fauna conservation will be considered in all stages of forest management. In particular, the requirements of **threatened species** and communities, aquatic fauna and cave fauna will be addressed.

Sources of information include the ***Threatened Fauna Manual for Production Forests in Tasmania, Threatened Fauna Adviser***, technical notes and specialist advice.

Basic Approach

Planning and Assessment for Fauna

See also Section D3 above.

During the preparation of a Forest Practices Plan the proposed operational area will be assessed to determine:

- **the known occurrences and potential habitat for threatened species;**
- the presence of or requirements for wildlife habitat strips;
- the requirements for wildlife habitat clumps;
- the presence of or requirements for special management zones for fauna.

A specialist will be consulted for advice where appropriate.

Wildlife habitat strips should be retained to maintain habitat diversity. As a guide, strips of uncut forest 100 m in width, based on streamside reserves but including links up slopes and across ridges to connect with watercourses in adjoining catchments, should be provided every 3-5 km. These strips should connect any large patches of forest which are not to be harvested, such as formal and informal reserves.

Patches of mature forest (wildlife habitat clumps) containing habitat trees with nesting hollows and other oldgrowth structural elements should be retained in coupes with few retained areas (e.g. streamside reserves, areas reserved for other values, areas reserved for operational reasons etc.). Retention of such wildlife habitat clumps assists maintenance of the habitat requirements of oldgrowth dependent fauna species, particularly hollow dependent fauna, and enhances recolonisation of areas following harvesting.

Site Management for Fauna in Native Forests

Within coupes where no burning or low intensity burning is intended (mainly partially harvested coupes), wildlife habitat clumps should be retained in areas which are not within 200 m of other retained areas. Clumps should be retained at a rate of approximately 1

clump every 5 ha and should contain a minimum of 2 to 3 habitat trees and where possible a range of trees and shrubs of other ages.

In coupes where high intensity burning is required to achieve regeneration or where cable harvesting is used (mainly clearfell coupes), wildlife habitat clumps should be retained along the boundary of the coupe where they can be protected from disturbance. As a guide retain clumps at approximately 200 m intervals along a coupe boundary in areas not within 200 m of other reserved areas. These clumps should be about 50 m by 20 m in size. Consideration should be given to retaining adjoining clumps when adjacent coupes are felled.

Consult *Fauna Conservation in Production Forests in Tasmania* or other sources for more details.

This section of the Code provides general principle and basic approach type statements, many of which have direct relevance to threatened species, usually through the cited planning manuals (which are discussed in sections below).

Section D3.3 of the Code deals specifically with the management of threatened species. The wording in the Code is a brief version of the formally signed document appended at Appendix B (the "agreed procedures").

D3.3 Threatened Species and Inadequately Reserved Plant Communities

Basic Approach

Management of threatened flora and fauna species and inadequately reserved plant communities are covered by legislation and processes that include the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the Tasmanian *Threatened Species Protection Act 1995*, the *National Parks and Wildlife Act 1970*, and the Tasmanian Regional Forest Agreement 1997.

This statement provides a direct link to relevant legislation including the TSPA and EPBC. Note that reference to the *National Parks and Wildlife Act 1970* is outdated and should be read as the *Nature Conservation Act 2002* (at least in part).

Threatened species and inadequately reserved plant communities will be managed in wood production areas in accordance with procedures agreed between the Forest Practices Board and DPIWE. The agreed procedures will include the development of endorsed management prescriptions through consultation among landowners, Forest Practices Officers and specialists within the Board and DPIWE. Under the agreed procedures Forest Practices Officers will:

This statement formalises the "agreed procedures" in the legally binding Code. Note that reference to the Forest Practices Board and DPIWE are outdated.

- consult the *Forest Botany Manual*, the *Threatened Fauna Manual for Production Forests in Tasmania*, and the *Threatened Fauna Adviser* to determine if threatened species or inadequately reserved plant communities occur or are likely to occur in the operational area;

This statement provides the link to the planning manuals published by the Forest Practices Authority. For the purpose of the present review, the statement above should be read in conjunction with the full transcript of the agreed procedures (Appendix B). Attention to clauses 3.1.2 and 3.2.2 are highlighted here to alert the panel to the role of the Scientific Advisory Committee (established under the TSPA) and the Forest Practices Advisory Council (established under the *Forest Practices Act 1985*) and the emphasis placed on regular review, including consultation with various parties.

- notify the appropriate specialist within the Forest Practices Board if threatened species or inadequately reserved plant communities occur or are likely to occur in the operational area;
- obtain an endorsed management prescription for the operational area and incorporate this prescription into the Forest Practices Plan. This may involve further consultation

between the Forest Practices Officer, the landowner, and specialists within the Forest Practices Board and DPIWE.

These statements are the core mechanism for Forest Practices Officers to liaise with the specialists of the Authority, who further liaise with other agencies (most notably DPIW). Again, the more detailed wording in the full transcript of the procedures are highlighted, specifically clauses 3.1.6 and 3.2.6 that place more specific constraints (most notably time) on the consultative protocols.

The conservation of threatened species and inadequately reserved plant communities may be achieved by reservation or prescription in accordance with the duty of care policy, voluntary arrangements such as the Private Land Reserve Program, or through legislative processes as mentioned above.

This statement provides a link to other provisions of the Code (e.g. duty of care), which are discussed further later, and other programs (e.g. Private Forest Reserves Program).

More on the “agreed procedures”

The agreed procedures appear in an abridged form in the Code. Some of the more important details have already been highlighted.

In addition to these, clauses 4, 5, 6, 7 and 8 deserve more discussion.

Clause 4 states:

Forest Practices Plans - Once the Forest Practices Officer has obtained an endorsed management prescription, the officer will apply the prescription by incorporating appropriate provisions into the Forest Practices Plan for the area. The provisions of a certified Forest Practices Plan are legally binding on all parties who operate within the area covered by the plan for the duration of the plan. A permit for the purposes of s.51 of the *Threatened Species Protection Act* is not required where a Forest Practices Plan has been certified in accordance with these procedures.

This clause provides the link to Section 51 of the TSPA, the permit provisions of the Act. This clause effectively means that an FPP, which includes prescriptions to manage threatened species that have been developed in accordance with the agreed procedures, does not require a separate permit under the TSPA.

A note of caution is made here that the agreed procedures appear to relate specifically to “wood production forests” and there may be some confusion as to their application to FPPs certified for other purposes (e.g. residential subdivisions outside of wood production forests). Section 51 of the TSPA does not mention the agreed procedures, simply refers to certified FPPs

Clause 5 states:

Monitoring of compliance – Compliance with the provisions of the Forest Practices Plan, including provisions that relate to threatened species, will be assessed by a Forest Practices Officer and a report on compliance will be lodged with the FPB within 30 days of the expiry of the plan, as required under s.25A of the Forest Practices Act. The Board will publish information on compliance in its Annual Report.

This clause provides the link to Section 25A of the *Forest Practices Act 1985* (certificate of compliance) and requires transparent reporting to parliament on the operation of the agreed procedures.

Clause 6 states:

Independent audit and enforcement– The Board will audit the standard of planning and the degree of compliance with the implementation of the provisions of the Code and Forest Practices Plan, including those that relate to threatened species as part of its annual audit. Results will be published in the Board's Annual Report, as required under s.4 of the Forest Practices Act. Appropriate action will be taken with respect to

instances of poor planning, or failure to comply with the provisions of a plan, in accordance with the provisions of the Forest Practices Act. Potential breaches of the Threatened Species Protection Act will be reported to DPIWE as soon as practicable.

This clause provides the link to the compliance activities of the Forest Practices Authority.

Clauses 7 and 8 state:

Monitoring of efficacy of prescriptions – The Board in association with the DPIWE will monitor the efficacy of management prescriptions through a coordinated approach to research.

Research – The FPB and the DPIWE will consult with landowners and other stakeholders to determine the priorities for research into the ecology and management requirements of threatened species. Both bodies will coordinate an approach to secure appropriate levels of funding from all available sources. The forest industry recognises its role in contributing to research into the effects of forest management practices on threatened species. The forest industry will consider the research needs for threatened species as part of its overall contribution to forest practices research under the terms of the forest practices research fund.

These clauses commit the parties (now the Forest Practices Authority and DPIW) to monitoring and research, including securing funding. The clauses do not specify how the monitoring and research will be coordinated, prioritised, funded and undertaken. One example, however, is the position of Research Coordinator position within the FPA, whose duties include coordinating the prioritising of biodiversity related research within the FPA, and also to provide links to other agencies (e.g. CRC, TSS, FT, etc.) through various mechanisms (e.g. working groups).

No further comment is made with respect to the agreed procedures because they will need to be reviewed to take account of legislative and administrative changes (which are outlined elsewhere in this document).

FPA planning tools related to threatened species

The Authority has produced a number of planning tools (a general term used to encompass manuals, databases, proformas, web pages, technical notes and maps) specifically related to the management of threatened species. Some of these (e.g. *Threatened Fauna Adviser*, *Forest Botany Manual*) are referred to directly in the Code and agreed procedures, while others are references more obliquely through other pathways (e.g. some technical notes are referred to in the *Threatened Fauna Adviser* but not the Code).

The intent of the planning tools is to meet the obligations of the forest practices system in managing threatened species, although neither the *Forest Practices Act* (or the Code produced under the Act) or the TSPA formally require such tools to be produced. Some of the tools acknowledge, however, that they have been developed in accordance with policies such as the agreed procedures or under the auspices of the mentioned Acts.

Threatened Fauna Manual (TFM)

The TFM is referred to directly in the *Forest Practices Code* and the agreed procedures, and indirectly in the *Regional Forest Agreement* (revised clause 97). The current version of the fauna evaluation sheet used by FPOs to assess proposed FPP areas requires direct use of the TFM.

The TFM was first developed by the FPB in 1995 (Jackson and Taylor 1995). It was developed as a first step to ensure that the intent of the TSPA was met by the forest industry and was part of the FPB's response (with support from the forest industry) to the release of the TSPA. Prior to 1995, "threatened" fauna were represented by

lists of species (vertebrates and invertebrates) compiled and maintained by specialist scientists representing various agencies (Vertebrate, Invertebrate and Flora Advisory Committees).

The TFM was the first manual in Tasmania to combine database information with descriptions of threatened fauna, their habitats and broad management objectives and recommendations. It was immediately used by the forest industry to take account of known and potential threatened fauna sites and habitat in wood production forests. Unlike databases that include only point data, the TFM was unique in that it not only listed known sites (e.g. grid references for WTE nests) but, and probably most importantly, it listed potential habitat for threatened fauna. This allowed the forest industry to take account of threatened fauna in a manner not undertaken by any other planning systems in Tasmania.

The TFM has been further developed by FPA specialists in collaboration with many species' specialists since 1995 into an online (web-based) database but its structure and content has remained effectively the same. However, the web-based system allows virtually instant updating of data and since about 1997, the FPA has dedicated staff time to maintaining the accuracy and currency of the database with respect to new sites, revised potential habitat descriptions and changes to lists of threatened species.

As new information becomes available (e.g. changes to threatened species lists, new sites, research and survey results) the TFM is updated. The FPA's TFM formed the basis for DPIWE's *Tasmania's Threatened Fauna Handbook: What, Where and How to Protect Tasmania's Threatened Animals* (Bryant and Jackson 1999).

The TFM is maintained as an Access database, linked to the web through computer code. The FPA has established a system of updating other key databases (the most important of which are the Conserve database managed by FT and the SPARQS GIS system maintained by Gunns Limited), through an automatic email update message to FT at each change to the database made by the FPA. Data is also supplied electronically to other parties within the forest industry (through agreement with DPIW) on a regular basis. Specialists from other agencies (such as DPIWE, University of Tasmania, other researchers) are also regularly contacted to obtain information on new sites for forest-dependent threatened fauna.

The database section of the current version of the online TFM is being gradually superseded by development of DPIW's *Natural Values Atlas*, although it is my understanding that full transfer of "ownership" has not occurred yet. The current databases are also becoming out-of-date because of recent administrative changes (S. Munks pers. comm. 2007).

In addition to the above statements regarding the database component of the TFM, the manual also contains profiles of most threatened species. More recently the FPA has been adding predicted range maps for several species to the web site.

Threatened Fauna Adviser (TFA)

The TFA is referred to directly in the *Forest Practices Code* and the agreed procedures, and indirectly in the *Regional Forest Agreement* (revised clause 97). The current version of the fauna evaluation sheet used by FPOs to assess proposed FPP areas requires direct use of the TFA.

The TFA was developed by the FPA, in consultation with (then) DPIWE, specialists and the forest industry, to provide a streamlined decision-support system, to

document current knowledge on habitat requirements and deliver management recommendations for forest-dependant threatened fauna in wood production forests.

Of note is that the current version of the TFA does not include several species that have been "recently" listed (e.g. masked owl, central north burrowing crayfish, tasmanian devil), is out of date with respect to currently listed species previously considered to be outside the scope of the system such as those wholly within reserves (e.g. lake fenton trapdoor spider) and several non-forest species now needing to be considered because of the requirement for FPPs for non-forest vegetation (e.g. potentially some near-coastal species and grassland dependent species).

The TFA delivers mainly operational level (i.e. in-coupe) management recommendations but does deliver some strategic advice on some species.

In 1995, the FPA established a "notification process" whereby FPOs who identified known sites or potential habitat for threatened fauna in proposed operation areas were required to notify the FPB Senior Zoologist, who in turn liaised with the equivalent of the now TSS to develop site-specific management recommendations. It became rapidly apparent to both the FPA and DPIWE that the consultation process was cumbersome in that in many circumstances, relatively standard management recommendations were being made (e.g. pre-logging searches for WTE nests were recommended in many cases but the precise area that was recommended for searching often differed, based on available information and expert opinion). It was concluded that it would be possible to capture the expert opinion into an expert system (decision-support system) that would allow appropriately trained people to deliver management recommendations for different species and situations.

The TFA was developed between 1997 and 2002, authored primarily by staff of the Authority (in combination with a software engineer from DPIWE). The development of management recommendations for each species involved extensive consultation with specialists. The specialists involved in the development of the decision-support pathways and the management recommendations are listed in the acknowledgments section of the installed version of the TFA.

It is important to note the difference among the terms "Advice", "Recommendations" and "Prescriptions" in reference to how threatened fauna are managed in wood production forests. For example, the TFA delivers htm-format documents referred to as "Recommendations". These so-called recommendations are the "endorsed management prescriptions" referred to in the "agreed procedures". In practice, specialists from the FPA provide "advice" to FPOs in the form of "recommendations". In some cases, these recommendations can be regarded as highly prescriptive (e.g. what size culvert to use in a creek crossing) to more interpretative statements (e.g. designing a minimum size reserve around a wedge-tailed eagle nest to take account of forest age, forest structure, topography and other site characteristics). It is the role of the FPO to interpret these recommendations and apply appropriate prescriptions in the FPP.

As required by the "agreed procedures" and clause 96(c) of the RFA, the TFA was reviewed and endorsed by the Scientific Advisory Committee (SAC) to the TSPA.

The TFA was endorsed by SAC after it examined the program, and the management recommendations it delivered. The TFA was formally endorsed by the Forest Practices Advisory Council on 29 August 2001.

During 2003, the specific recommendations of the TFA were thoroughly reviewed by the Forest Practices. Due to resource limitations, the next version of the TFA,

incorporating the reviewed information, has not been finalised. It is beyond the scope of the present document to summarise the recommendations made at the time, and these will be reviewed (again) when the TFA is further reviewed because several of the recommendations for several species are under ongoing internal (i.e. TSS, FPA, industry) development and review (e.g. swift parrot nesting habitat modelling, masked owl survey requirements, wedge-tailed eagle nest management, etc.) (S. Munks pers. comm. 2007).

Fauna Technical Note Series

The *Fauna Technical Note Series* produced by the FPA is intended as a set of advisory guidelines only, used by FPOs as part of the planning process. Each note has the following opening statement, which is self-explanatory to the purpose of the technical notes:

“The Fauna Technical Note Series provides supplementary information and technical explanation for Forest Practices Officers on commonly encountered fauna management issues in production forests. These technical notes are advisory guidelines and do not constitute additions/alterations to the Forest Practices Code”.

Technical notes are written by specialists of the FPA on a range of management topics. The currently available technical notes have been endorsed by the Forest Practices Advisory Council (as constituted under the *Forest Practices Act 1985*).

To date, the following technical notes have been prepared in relation to management of threatened fauna (taken from FPA’s web site). Technical Note 7 (Wildlife Habitat Clumps) is retained in this list because the TFA frequently recommends the use of WHCs for management of threatened fauna. Technical Note 9 (Fauna Record Sheet) is also retained in this list because it provides one mechanism for the forest industry to supply details of threatened fauna sightings to DPIW.

Technical Note 1: Eagle Nest Management	Management of eagles nests. Replaces previous Technical Notes 1 - 6, 10, 16, 17
Technical Note 7: Wildlife Habitat Clump Flow Diagram	Some background information on implementation of wildlife habitat clump provisions of the <i>Forest Practices Code</i> .
Technical Note 8: Wildlife Habitat Strip Location and Management Guidelines	Some background information on implementation of wildlife habitat strip provisions of the <i>Forest Practices Code</i> .
Technical Note 9: Fauna Record Sheet	This record form can be used to complete details of interesting or unusual sightings of any fauna. Details will be passed on to PWS.
Technical Note 11: Methods for surveying for threatened stag beetle species	Tasmania has five species of stag beetle listed as threatened on the Tasmanian Threatened Species Protection Act 1995. This technical note outlines the recommended survey method so that results can be interpreted in terms of existing knowledge.

<p>Technical Note 12: Goshawk habitat categories</p>	<p>These categories indicate habitat suitability for the grey goshawk and may be used to map habitat within a particular coupe/property to assist with decisions for the management of habitat for this species.</p>
<p>Technical Note 13: Method for Surveying for the Keeled Snail</p>	<p>The keeled snail (<i>Tasmaphena lamproides</i>) is listed as Rare on the <i>Threatened Species Protection Act 1995</i>. Surveys may be required this species in areas proposed for forestry operations. This technical note outlines recommended survey methods.</p>
<p>Technical Note 14: Nest Identification</p>	<p>Identification of eagle and goshawk nests can be tricky, even for the specialists. In answer to this common question we have put together these notes on things to look for when trying to decide to whom that large collection of twigs you have just found belongs?</p>

Forest Botany Manual (FBM)

The FBM is referred to directly in the *Forest Practices Code* and the agreed procedures, and indirectly in the *Regional Forest Agreement* (revised clause 97). The current version of the flora evaluation sheet used by FPOs to assess proposed FPP areas requires direct use of the FBM.

The FBM evolved over many years starting in about 1985. The first version of the FBM was released in modular format for several bioregions (as Nature Conservation Regions at the time) during the late 1980s to early 1990s. Following a hiatus in production in the mid 1990s, funding and staff changes, and the signing of the *Regional Forest Agreement* and development of the “agreed procedures”, prompted a major revision of the FBM during the latter half of the 1990s and into the early 2000s.

The current version of the FBM was endorsed by FPAC and SAC in mid 2005 and formally released through a series of training courses for FPOs in mid to late 2005.

The FBM is modular in structure with an introductory module which explicitly states that the purpose of the manual is to satisfy the flora management requirements of the *Forest Practices Code* and other legislation and policies, and 7 regional modules (based on the IBRA 4 bioregions used for the RFA).

Sections 3 and 4 of the FBM are the key sections dealing with threatened flora values. Section 3 provides lists of species categorised by forest quality (essentially an “early warning” system) to alert planners to the potential importance of a site for threatened flora. Section 4 allows a site to be assessed with respect to the chance of supporting threatened flora (a “safety net”). The current flora evaluation sheet requires planners to use the FBM, specifically addressing the requirements of sections 3 and 4. The evaluation process also requires the use of a recognised database (databases are discussed in further detail below).

Flora Technical Note Series

The *Flora Technical Note Series* produced by the FPA is intended as a set of advisory guidelines only, used by FPOs as part of the planning process. At this stage, there are no technical notes specifically addressing threatened flora issues, although

several have direct implications for threatened flora issues e.g. management of *Phytophthora cinnamomi* (these notes are discussed later in this document).

Flora and Fauna Evaluation Sheets

The current flora and fauna evaluation sheets used by FPOs to assess proposed FPP areas specifically require the use of threatened species databases and planning tools discussed above.

The evaluation sheets are supported by a broader *Planning Manual* that includes instruction on use and also explains the “notification system” in which FPOs seek specialist advice from the FPA for particular values identified from proposed FPP areas.

Non-FPA planning tools related to threatened species

Agencies other than the FPA have produced a number of planning tools relevant to the management of threatened species under the provisions of the forest practices system. Some of these are listed and discussed below although in briefer detail than the FPA-based tools.

Recovery Plans and Listing Statements

There are a number of recovery plans that have been endorsed by the State (under the TSPA) and/or Commonwealth (under the EPBC). Recovery plans are specifically referred to in the *Regional Forest Agreement* (revised clause 70).

Listing Statements, produced under the TSPA, have been prepared for a number of threatened species. Appendix D includes a list of the current Listing Statements and Recovery Plans for threatened flora and fauna (those considered forest-dependent by the author are highlighted, although it is noted that the forest practices system now often involves consideration of species that inhabit non-forest habitats, except for perhaps some wholly marine or lacustrine species).

Listing Statements essentially provide the reader (the audience seems to be mainly land managers) with the most up-to-date information on the taxonomy, biology, habitat, ecology, distribution, threats and management requirements. Their format is fairly consistent between flora and fauna species. Recovery Plans tend to include the same information as Listing Statements but also set objectives for management, prioritise actions and assign funding and allocate agencies/parties to various tasks. Recovery Plans usually have a finite life before being reviewed.

The *Threatened Fauna Adviser* includes the following statement in all recommendations (my emphasis):

Under the current legislation, agreements, codes of practice, **recovery plan actions** and **listing statements**, the following is recommended to minimise the impact of the proposed operation on habitat for this species. Implementation of these recommended actions in this 'off-reserve' area will help to maintain a network of habitat important for such species throughout their range. The prescribed actions are based on current knowledge and expert opinion and they may change as new information becomes available.

Natural Values Atlas (NVA)

DPIW have recently developed a database that stores and retrieves information on many natural values in Tasmania. Relevant to the biodiversity provisions of the Code, it includes vegetation mapping (TASVEG) and threatened species localities.

The NVA is not yet formally recognised by FPA although the flora evaluation sheet does make reference to GTSpot, the database effectively being superseded by the NVA.

"Conserve" database

Forestry Tasmania maintains a database/GIS system that includes threatened flora and fauna information. The database is recognised by FPA through the flora and fauna evaluation sheets and related planning tools.

Priority species

Definitions

Priority species were defined under the *Regional Forest Agreement*. Most priority species listed in the original RFA (on Attachment 2) were those listed on either the EPBCA and/or TSPA (A.1 species on Attachment 2 of the RFA). However, it also includes a suite of species not included on any legislation such as:

A.2 Species with existing protection by management prescription and/or reservation

This list included the Tasmanian bettong, burgundy snail (*Helicarion rubicundus*) and wet forest snail (*Tasmaphena lamproides*). The latter two species are now listed on the TSPA so are covered by the mechanisms discussed above. The bettong is not listed on either the TSPA or EPBCA. It has been provided with a species profile in the *Threatened Fauna Manual* and Forestry Tasmania established a "Wildlife Priority Area" (Special Management Zone for Fauna under their MDC system) in the Virginstowe State forest area.

A.3 Other species protected through existing mechanisms (e.g. Forest Practices Code and/or reservation)

This list included two general groups: hollow dependent species and karst species.

The Code contains specific provisions in relation to management of hollow dependent vertebrate species (see copied sections earlier in this document) and the FPA has produced a technical note on the implementation of wildlife habitat clumps and wildlife habitat strips, two of the key mechanisms for managing hollow dependent fauna.

In addition, several threatened species covered by the mechanisms discussed already are hollow dependent (e.g. swift parrot, masked owl).

Part B Other identified species requiring further research to determine requirement for protection or listing

This list included several species listed on the TSPA but not the EPBC. It included several species subsequently listed on the TSPA (e.g. white-bellied sea-eagle). The status of some of these species remains unclear because of taxonomic confusion.

What are the objectives of the RFA in relation to priority species?

The revisions to the RFA following Justice Marshall's federal court ruling state (relevant clauses are shown below):

SCHEDULE OF AMENDMENTS TO THE TASMANIAN
REGIONAL FOREST AGREEMENT

1. Replace the current clause 68 of the agreement with the following:

“68. The Parties agree that the CAR Reserve System, established in accordance with this Agreement, and the application of management strategies and management prescriptions developed under Tasmania’s Forest Management Systems, protect rare and threatened fauna and flora species and Forest Communities.”
2. Replace the current clause 70 with the following:

“70. The Parties agree that where a Recovery Plan for a forest-related species in Tasmania or a Threat Abatement Plan concerning a Priority Species (Attachment 2 Part A) is in force, any recommended actions in the Recovery Plan or the Threat Abatement Plan that are within the jurisdiction of the Parties will be carried out in accordance with the timelines specified in the relevant Plan. If an action has not been carried out in accordance with the timelines in the relevant Plan, it will be carried out as soon as possible afterwards.”
3. Replace the introductory paragraph to clause 96 and 96 (a) with the following:

“96. The State agrees that any new or altered management prescriptions that are developed over the term of the Agreement for the Priority Species in Attachment 2, as amended from time to time, will:

(a) provide for the maintenance of the relevant species;”
4. Replace the existing Clause 97 with the following:

“97. The State agrees to maintain and to update as necessary a database or databases of management prescriptions and responses to disturbance related to threatened fauna and flora and confirms that it intends to use the database or databases as a basis for updating relevant State management documents and as a basis for the management of threatened species. Updated database contents will be periodically made available in a publicly accessible form for public comment.”
5. Amend Clause 2 by deleting the definitions of “Listing Statements”, “Management Prescriptions Database”, “Response to Disturbance Database”, “Threatened Fauna Manual” and “Threatened Species Database” in Part 1 clause 2;

How are the objectives of the RFA in relation to priority species met under the forest practices system?

The revised statements above recognise that the existing forest practices system “protects” priority species. Note that the existing system has built-in mechanisms for review and improvement (see Schedule 7 of the *Forest Practices Act* for an example). Schedule 7 of the *Forest Practices Act* is included at Appendix E for reference.

There are internal State government policies for review of the RFA, including the lists of priority species. This has been undertaken and DPIW use a revised (but formally unpublished) list of priority species that is substantially different to the original RFA

list. However, this has little impact on the processes described above because the forest practices system considers all listed species and priority species in its scope.

For example, the *Forest Botany Manual* includes all listed flora species and priority flora species and some more besides (e.g. regionally significant species). The *Threatened Fauna Manual* included several of the priority species originally included in the RFA (e.g. white-bellied sea-eagle) prior to their listing and these listings in the TFM are maintained.

Vegetation types

The *Regional Forest Agreement* committed the State to various levels of reservation and management of different forest types (e.g. 15% of each forest community; 60% of mapped oldgrowth; 100% of certain vegetation types).

A comment on classification of vegetation types

This document is not intended to provide a summary of the history of vegetation classification in Tasmania. However, a brief preface is needed to allow the reader to more easily follow the links between policy instruments, and perhaps more importantly the potential implications of using one system of classification over another.

The forest practices system currently recognises three main levels of vegetation classification. The *Forest Botany Manual* provides keys to allow the forest planner to identify what is referred to as a "floristic community". These so-called floristic communities are basically the pre-RFA communities identified by workers such as Kirkpatrick *et al.* (the wet sclerophyll classification), Duncan and Brown (the dry sclerophyll classification) and Jarman *et al.* (the rainforest classification). In the *Forest Botany Manual*, these floristic communities are then related to the RFA communities. The relationship between the floristic and RFA communities is many to one. For example, wet sclerophyll and mixed forest dominated by *E. obliqua* is classified into about 12 floristic communities but the RFA community recognised just one wet forest type dominated by *E. obliqua*. The relationship is less clear for other communities. For example, "wet" floristic communities dominated by *E. globulus* (about 3) are all subsumed into the RFA unit *E. regnans* forest.

Post-RFA, the State progressed and developed the so-called TASVEG vegetation mapping project. This initially covered the non-forest vegetation not covered under the RFA but has expanded into revisions of some RFA-forest mapping. TASVEG is now recognised as the government-endorsed classification of vegetation for conservation management purposes, although it is not formally recognised in legislation (except threatened vegetation types are listed on Schedule 3 of the *Nature Conservation Act 2002*). The relationship between TASVEG and RFA communities is one to many or one to one or one to none, and the relationship between TASVEG and floristic communities is even more confusing.

The *Forest Botany Manual*, which is currently used for forest planning, does not make any formal links between floristic or RFA communities and TASVEG. The current Forest Practices Plan database uses RFA vegetation types to allow monitoring of changes to vegetation covers (e.g. *Permanent Native Forest Estate* policy requirements).

Tasmanian Permanent Native Forest Estate Policy (PFE)

The RFA committed the State to developing a Permanent Native Forest Estate policy (Attachment 9 of the RFA). A policy was developed in 1997. Subsequent to this, an agreement between the State and Commonwealth was signed in June 2003 (*Bilateral Agreement between the Commonwealth of Australia and the State of Tasmania to deliver the Natural Heritage Trust*). This agreement included specific reference to reviewing the PNFE policy in relation to forest and non-forest vegetation communities.

The key terms of the revised policy are stated below.

This policy statement replaces the 1997 "Maintaining a Permanent Forest Estate" policy document, which now ceases to have effect, and is the policy referred to in Attachment 9 of the Tasmanian Regional Forest Agreement and S4C (fb) of the Forest Practices Act 1985. The Policy is given effect through the Forest Practices Authority's consideration of applications for Forest Practices Plans under the Forest Practices Act 1985.

1. Objectives

Tasmania will maintain a Permanent Forest Estate that comprises areas of native forest managed on a sustainable basis both within formal reserves and within multiple-use forests across public and private land in order to -

1.1 Maintain and sustainably manage Tasmania's native forest resource base and associated economic, nature conservation, ecosystem services, scenic, cultural and amenity values;

1.2 Ensure that the conservation status of forest communities is maintained or enhanced;

1.3 Provide for the reasonable aspirations of the Tasmanian community for sustainable economic development; and

1.4 Ensure that private landholders continue to be able to manage native forest on private land on a sustainable basis, including existing sustainable uses of those forests.

In meeting these objectives, the burden of transition will be borne in the first instance on public land and, for private land, flexibility will be developed into the implementation of this policy to the extent that these objectives are met.

2. Native Forests

2.1 Statewide retention levels

2.1.1 95% of the 1996 CRA native forest area is to be maintained on a statewide basis.

2.1.2 Broadscale clearing and conversion of native forest on public land will be phased-out by 2010.

2.1.3 Broadscale clearing and conversion on native forest on private land will be phased-out over a period of ten years from 13th May 2005.

2.2 Forest Communities retention levels

2.2.1 Rare, Vulnerable and Endangered (threatened) forest communities – all viable threatened forest communities are to be maintained other than in those circumstances where conversion will not substantially detract from the conservation of that forest community or conservation values within the immediate area.

2.2.2 Non-threatened forest communities –the mapping and conservation status of any non-threatened forest community will be reviewed if the rate of conversion is likely to result in the area of a forest community falling below 75% of the 1996 CRA native forest area of that community in an IBRA bioregion or, a minimum of 2,000 hectares in an IBRA bioregion (which ever is the higher) unless not of bioregional significance (as under 4.4.3 below). Action will be taken to ensure that conversion does not result in any non-threatened forest community becoming threatened. Non-threatened forest communities must be maintained at a level no less than 50% of the 1996 CRA native forest area of each community in each IBRA bioregion.

2.3 Biodiversity, water quality and salinity

The policy is underpinned by guidelines for biodiversity, water quality and salinity outcomes that will be implemented through regulation mechanisms: –

2.3.1 the protection of regional biodiversity will be addressed through provisions in the Forest Practices Code, reflecting the guidelines in Clauses 2.1, 2.2 and 3 of this policy.

2.3.2 The protection of water quality values including meeting salinity objectives will be addressed through provisions in the Forest Practices Code. Salinity objectives will be included in the next planned review of the Code and will be consistent with the objectives of the Tasmanian Salinity Strategy. Prior to the next Code review applications for clearance and conversion will be assessed having regard to available salinity risk mapping.

3. Non-Forest Vegetation

Forestry operations regulated by the Forest Practices Authority must not include incidental clearance and conversion of threatened non-forest vegetation communities, except in those conditions where the activity will not substantially detract from the conservation of that non-forest vegetation community or conservation values within the immediate area

How are the objectives of the PNFE policy met under the forest practices system?

The Forest Practices Authority has implemented a number of administrative arrangements to facilitate delivery of the objectives of the PFE. These include (with discussion under each):

- *Forest Botany Manual* allowing planners to identify vegetation types

[This is discussed in detail above].

- Associated planning tools such as web-based vegetation descriptions

[These include recently posted detailed descriptions of threatened non-forest vegetation types and documentation on how to identify if such vegetation types may be present and what action to take].

- Administrative Instructions

[The Authority issued a series of Administrative Instructions to Forest Practices Officers advising of the requirements for management of threatened vegetation types and also some non-threatened vegetation types approaching threshold limits. In addition, an instruction regarding clearing of vegetation on King Island was issued].

- Forest Practices Plan database, Certificates of Compliance and associated database/web mechanisms

The Authority maintains a database of FPP coversheet information. Several changes were made to the coversheet during the course of development of the PFE to allow its current format to track changes in forest and non-forest vegetation cover. Queries and reports are run to allow officers of the Authority to monitor vegetation changes and report on the same (e.g. through the annual report to parliament).

Other biodiversity values

The preceding sections have dealt specifically with threatened species, priority species and vegetation types (including threatened communities). There are a number of policy instruments that have objectives in relation to management of biodiversity.

Tasmanian Nature Conservation Strategy 2002-2006

The Strategy includes the following priorities (with author commentary below each on how the objectives of the Strategy are met under the forest practices system):

1 Improve the protection of Tasmania's native forest and non-forest vegetation. This should be done by the following actions. Increase the retention of native forest at a Statewide level through the Permanent Forest Estate Policy, ensure adequate representation of forest communities at IBRA region level and improve the protection of threatened forest communities. Improve the protection of high conservation value native non-forest vegetation, particularly native grasslands and grassy woodlands, through sustainable management programs, the introduction of an assessment and approvals process where destruction is proposed, and emergency funding to protect vegetation requiring immediate and urgent protection. (Actions 39, 40, 41, 42)

The PFE policy has been revised and is discussed in detail above. Administrative Instructions and mechanisms related to protection of threatened forest and non-forest communities have also been discussed.

2 Establish a Conservation Fund so that nature conservation programs are resourced on a long-term basis and at realistic levels, and create a State Emergency Fund for priority and urgent situations. These funds need to recognise that nature conservation is a community responsibility. Investigate a range of revenue-raising and funding options to support these funds. (Actions 63, 64)

It is noted that the Authority has implemented a referral process of FPPs to DPIW to various conservation programs to facilitate this objective.

3 In the context of the Tasmanian Natural Resource Management Framework, increase and recognise community involvement in nature conservation issues at the regional level. This includes enabling the community to be more involved in policy setting and decision making. This is essential to foster and build on community involvement and ownership of nature conservation. (Action 59)

The Forest Practices Act allows for public input into policy setting (e.g. reviews of the Code), and the Authority has been actively promoting the forest practices system through a communications officer (e.g. production of information booklets).

4 Significantly increase measures to prevent the entry of weeds, pests and diseases into Tasmania and control those already present. Many actions will be needed to address this issue. Actions should include increasing quarantine and surveillance, undertaking rigorous risk assessments, having emergency response plans, and implementing existing strategies dealing with weeds, pests and diseases. (Actions 45, 46)

The Authority has taken no substantive action in relation to weed and quarantine issues but has been an active participant in the development of strategies to manage root-rot fungus (e.g. production of technical note on *Phytophthora cinnamomi*).

5 Improve protection for freshwater environments. As a priority, identify and establish freshwater CAR reserves and complete integrated catchment planning for natural resource management. (Actions 15, 47)

The Authority is a key part of the Conservation of Freshwater Ecosystems project.

6 Improve the long-term protection and management of natural diversity on private land. This should include developing codes of practices supported by realistic incentives and packages, for all major land use activities. To assist this further, the existing RFA Private Forest Reserve Program should be broadened in scope and maintained long-term. (Actions 18, 19, 20)

No further comment in relation to the forest practices system (see comments under point 2).

7 Improve sustainable land practices in agriculture by developing codes of practice for individual agricultural sectors and supporting this with a range of packages including

accreditation and certification, property management planning, realistic financial incentives and more technical extension services. (Actions 22, 23, 24)

No comment in relation to the forest practices system; not directly applicable.

8 Increase financial support for the Threatened Species Strategy to provide greater protection for State-listed species, develop a range of mechanisms for broad-scale protection, increase effort in a range of other areas and encourage greater co-operation in recovery actions. (Action 17)

No comment in relation to the forest practices system; this is a DPIW-based item, although it is noted that the Authority actively engages in research into the management and ecology of many forest-dependent threatened species (flora and fauna).

9 Improve the capacity of planning processes to protect natural diversity. This should include reviewing the Resource Management and Planning System to facilitate more regional planning between state and local management authorities, to improve local government planning processes and to ensure strategic planning and development of planning schemes formally address nature conservation issues. (Actions 9, 10, 11)

No comment in relation to the forest practices system; covered by other TOR.

10 Create new nature conservation legislation by merging and extending relevant aspects of the *National Parks and Wildlife Act 1970* and the *Threatened Species Protection Act 1995*. This should improve protection for all natural elements in all environments and across all land tenures. A review of the other statutes dealing with the protection of natural elements should also be undertaken with the aim of improving their protection. (Actions 6, 7)

No comment in relation to the forest practices system; this was done through the creation of the *Nature Conservation Act 2002*, in part.

11 Include mandatory high environmental standards in the accreditation systems for key industries in Tasmania. These standards should include a code of practice with a duty of care component, a certification of product quality and of minimal environmental impact during production, and a third-party audit. Where possible the process should be linked to financial advantages such as an ecolabel or other incentives. (Action 22)

The forest industry has a code of practice, namely the *Forest Practices Code*, which is subject to approval and review processes under the *Forest Practices Act*. The focus of the Code is on wood production activities but increasingly the forest practices system is extending to non wood production activities such as agricultural clearing, quarries, residential subdivisions, mines, etc. The Code includes a specific "duty of care" component (this is discussed separately below).

12 Improve the standard of environmental impact assessments and environmental management plans through the provision of revised generic guidelines which include check lists of key nature conservation issues to be assessed and requirements for on-site assessments where appropriate. (Action 12)

The Authority requires all proposed FPPs to be assessed according to a set of guidelines (as outlined in the special values evaluation sheets issued by the Authority). As noted in sections above, this evaluation requires use of key planning tools that have been endorsed by FPAC and SAC (e.g. the *Threatened Fauna Manual* and *Forest Botany Manual*). It is noted that DPIW also produced a Consultant's Brief in 2004, which relates to assessment of development proposals. There are several differences between the DPIW and FPA "briefs".

13 Target well recognised gaps in scientific research. Priorities include biological surveys and habitat mapping of marine systems, systematic surveys and research on invertebrates and non-vascular plants including their taxonomy and ecology, habitat requirements and life history of freshwater species, descriptive inventories and process research on major representative classes of Tasmanian landforms, soil systems and bedrock geology. (Action 1)

The Authority has implemented an administrative structure that allows for coordination of research prioritisation. A “forest research fund” has also been established, although the status of funding and project allocation is unknown to the author.

14 Explicit nature conservation objectives should be provided in all plans and regulations involving marine and freshwater resources. Plans should be implemented, audited and enforced. (Action 26)

No comment in relation to the forest practices system; mainly related to management of aquatic habitats and not directly to traditional forestry-related activities covered by the Code. There are provisions in the Forest Practices Code for the conservation management of freshwater systems.

15 Within the regional context of the Tasmanian Natural Resource Management Framework, support community extension through a network of natural resource management officers operating within local government and at the regional level. (Action 61)

No comment in relation to the forest practices system; not applicable to the current machinations of the system.

The Strategy includes the following definitions:

The Strategy included the following key actions in relation to the forest industry (note that there are also key actions for other industries that should be referred to also e.g. agriculture). Each item is discussed in turn below.

31. Amend the *Forest Practices Act 1985* to increase protection for special values. This includes:

- identifying and protecting remnants as a ‘special value’ and classifying them in forestry planning as ‘vulnerable land’;

The *Forest Botany Manual* includes reference to “remnants” and this also appears on the flora evaluation sheet. There are several “loose” definitions of remnant within the nature conservation arena and the one currently used in the forest practices system is different to the one used during RFA mapping of remnants.

- permanently protecting ‘reserves’ (e.g. streamside reserves, etc.) after the Forest Practices Plan has expired;

The *Forest Practices Act* and associated regulations clearly include streamside reserves and areas excluded under expired FPPs as “vulnerable land”, which means that such areas cannot be further “cleared” (within the broad meaning of the term under the Act) without further assessment by the Authority.

- providing stronger obligations and a duty of care to protect threatened elements.

32. Increase the research effort into the efficacy of prescriptions in the Forest Practices Code and review those prescriptions in the light of research results. Two research priorities are the protection of catchments and stream integrity, and the effects of plantations on fragmentation in the landscape.

See comments under point 13 above.

Tasmanian Natural Resource Management Act 2002

Schedule 1 of the Act states the objectives of that Act, as follows (with author commentary below each item in relation to the forest practices system):

1. The objectives of the resource management and planning system of Tasmania are –
 - (a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and

The *Forest Practices Code* is based on the concept of "reasonable protection to the environment" i.e. wood production in the context of managing environmental values, including biodiversity. The Code is the key policy instrument addressing this broad objective of the *Natural Resource Management Act* (and other acts that include the same set of objectives of the resource management and planning systems).

(b) to provide for the fair, orderly and sustainable use and development of air, land and water; and

No specific comment in relation to the forest practices system. It is argued that the Code meets this objective (see discussion under section on Code for intent of Code in relation to environmental outcomes).

(c) to encourage public involvement in resource management and planning; and

No detailed comment in relation to the forest practices system. However, it is noted that the *Forest Practices Act* requires review of the Code and this includes public consultation.

(d) to facilitate economic development in accordance with the objectives set out in paragraphs (a), (b) and (c); and

No comment in relation to the forest practices system; this is a whole-of-government objective, the Code does not set policy.

(e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State.

No comment in relation to the forest practices system; see comment above.

Tasmanian Nature Conservation Act 2002 (NCA)

The primary purposes of the NCA are to make provision with respect to the conservation and protection of the fauna, flora and geological diversity of the State, to provide for the declaration of national parks and other reserved land and for related purposes. Recent amendments to the NCA have been affected through the *Tasmanian Nature Conservation Amendment (Threatened Native Vegetation Communities) Bill 2006*.

The listing of threatened native vegetation on the Act is linked directly to concomitant changes to the *Forest Practices Act*, which has resulted in administrative adjustments to enable the Authority to meet the intent of the legislation (e.g. education program, web-based vegetation descriptions, administrative instructions, etc.).

The NCA also lists on schedules "protected wildlife", which includes most vertebrate fauna species (whether listed on the TSPA or not) and many invertebrate fauna (mainly those listed on the TSPA, although there are odd discrepancies). The NCA has a separate permit system for taking of listed protected wildlife, which is not linked to the TSPA or *Forest Practices Act*. The protected wildlife regulations were updated in 2007 such that no permit is required if there is a certified Forest Practices Plan.

The "duty of care" policy

The *Forest Practices Code* includes a duty of care policy. The policy is stated in the Code as follows:

"The duty of care of landowners under the provisions of this Code, which is defined as the fundamental contribution of the landowner to the conservation of natural and cultural values that are deemed to be significant under the forest practices system. The landowners duty of care includes: all measures that are necessary to protect soil and water values as detailed in this Code; the reservation of other significant natural and

cultural values. This will be at a level of up to 5% of the existing and proposed forest on the property for areas totally excluded from operations. In circumstances where partial harvesting of the reserve area is compatible with the protection of the values, the level will be up to 10%. The conservation of values beyond the duty of care is deemed to be for the community benefit and should be achieved on a voluntary basis or through compensation mechanisms where available”.

The duty of care policy has specific relevance to the management of biodiversity and is thus discussed as a separate policy mechanism. It is noted that recent amendments to the *Nature Conservation Act 2002* now mean that an “affected owner” includes those affected by both threatened species and threatened vegetation types but that compensation is not considered for any areas of land up to the threshold limits stated in the duty of care policy.

The duty of care policy is implemented on a case-by-case basis by Forest Practices Officers in consultation with specialists of the Authority and other agencies. The policy does not necessarily get applied automatically to all properties, and if applied, does not necessarily include land to the maximum threshold limit. In many cases, anecdotal evidence (which would be supported by an examination of FPPs) suggests that the threshold limits are frequently exceeded.

There is a high level of “good will” attached to the duty of care policy. To date, the duty of care policy has not been “tested” in a court of law (or even in a less formal forum such as RMPAT).

The “compensation mechanism” referred to in the policy is the link between the *Nature Conservation Act 2002* and the *Forest Practices Act 1985*, which allows “affected owners” to go through an appeal process either the Forest Practices Tribunal or directly via the minister responsible for the *Nature Conservation Act* to apply for compensation.

Other biodiversity provisions of the Code

The *Forest Practices Code* includes numerous references to the management of various biodiversity values that have not been discussed. The main focus of this document has been on specific elements of biodiversity such as threatened species and vegetation types because there are policy mechanisms and agreements in place to meet the objectives of a policy instrument (e.g. the “agreed procedures” to deal with threatened species).

There are many provisions of the Code in relation to biodiversity that implicitly meet many of the broad objectives of biodiversity policies and legislation. In most cases the relationship between the provision and a particular policy instrument is unclear (and certainly not explicitly stated except in the most general of terms) and there are not specific agreements or documentation between agencies recognising these provisions. For example, the streamside reserve provisions of the Code clearly meet some of the objectives of various water management policies.

Some of the key provisions related to biodiversity are listed below along with examples of policy instruments that they may relate to (but note that there may other instruments that also relate to the provision).

- Streamside reserves

Meets some of the objectives of reservation levels of vegetation types under the RFA and associated policies such as the PFE, and specifically addressed one of the key actions of the *Nature Conservation Strategy*. Streamside reserves are also used extensively to cater for threatened species under the *Threatened Fauna Adviser*.

- Wildlife Habitat Clumps and Wildlife Habitat Strips

The *Regional Forest Agreement* included “hollow dependent species” as a specific subset of priority fauna, noting that existing mechanisms including the Code will cater for these species. WHCs and WHSs have an emphasis on retention of mature elements and are also used extensively to cater for threatened species under the *Threatened Fauna Adviser*.

- Management of remnant vegetation

Meets some of the objectives of reservation levels of vegetation types under the RFA and associated policies such as the PFE, and specifically addressed one of the key actions of the *Nature Conservation Strategy*.

- Management of relict rainforest and other sensitive environments

Meets some of the objectives of reservation levels of vegetation types under the RFA and associated policies such as the PFE.

- Management of pests and diseases

Through policies on such pathogens as *Phytophthora cinnamomi* (e.g. see recently endorsed *Flora technical Note* on management of this pathogen), various objectives of instruments such as the EPBCA (which has a specific policy on this pathogen), TSPA (through management of susceptible listed species) and other internal policies are met.

- Road construction across streams

The provisions may meet some of the objectives of the *Inland Fisheries Act* (in relation to fish passage).

Appendix A. Consultant Brief

Project

Review of processes for conservation of biodiversity under the Forest Practices Code (2000)

Tasks

- To review information relevant to the Terms of Reference (TOR) 2a and c (see below) and prepare Background document (2) for consideration by the Biodiversity review Panel.
- To prepare and deliver a presentation for the Biodiversity Review Panel summarising the information contained within the background document.

Timeframe

- May 14th – Provide a draft of Background document 2 (addressing TOR 2a and c) to the Executive Officer and Chair of BERP.
- May 23rd – Attend BERP meeting 3 to present summary of information contained in Background document 2.

Terms of Reference

1. Review the role of the Forest Practices System in the overall approach to the maintenance of Biodiversity in the State.
2. Review the relevance and scope of the Forest Practices System in relation to biodiversity conservation and evaluate the ability of existing provisions to meet conservation objectives at the local, catchment and regional scales. In particular consider:
 - a) Processes and planning tools to meet objectives and requirements of the RFA, Tasmanian Nature Conservation Strategy, Threatened Species Strategy, Threatened Species Recovery Plans, Tasmanian *Threatened Species Protection Act, 1995* and other relevant National and State legislation and policies.
 - b) Processes and planning tools to address current forest practices at both the landscape and stand level. Provisions to address plantation design and planning are a priority. Provisions for stream fauna are also a priority. In particular, consider the research undertaken to address issues raised in the last review of the Code, relating to the management of stream fauna, and translate outcomes into recommended actions.
 - c) Processes and planning tools for facilitating legislative responsibilities amongst agencies (e.g. interagency agreed procedures).
 - d) Processes and planning tools to facilitate implementation - practicability of current planning processes and provisions (strategic and operational).
 - e) Relationships between biodiversity provisions and other forest management provisions covered in the Code (eg. provisions for other natural and cultural values, roading, burning etc.).
3. Review the monitoring (implementation and effectiveness) that underpins the biodiversity provisions of the Code. What are the mechanisms for delivery of adaptive management under the FP system? Is the Code sufficiently adaptive in its approach? Are there appropriate feedback mechanisms outlined in the Code?
4. Review current research relating to the distribution, ecology and impacts of forest practices on forest fauna and flora and report on future funding priorities for new information.

Appendix B. "Agreed procedures"

Procedures for the management of threatened species in wood production forests under the forest practices system

Threatened species as listed in the schedules to the *Threatened Species Protection Act* 1995 will be managed in wood production forests under the forest practices system as follows.

1. *Provisions of the Forest Practices Code.* The Code prescribes the approach that must be taken with respect to the conservation of flora and fauna, including threatened species. The Code (2000) provides that threatened species must be managed in accordance with procedures agreed between the Forest Practices Board (FPB) and the Director of the National Parks and Wildlife Service (pursuant to s.5 of the *National Parks and Wildlife Act* 1970). This document sets out those agreed procedures.
2. *Forest Practices Officers* – Forest Practices Officers are responsible for planning and supervising forest operations and are therefore key personnel for the transmission of good management prescriptions to landowners and forest workers. Specialists within the FPB and DPIWE will actively support and facilitate the continuing training of Forest Practices Officers.
3. *Endorsed management prescriptions*
 - 3.1 *Fauna*
 - 3.1.1 The *Threatened Fauna Manual for Production Forests in Tasmania* and the *Threatened Fauna Adviser Expert System* program will be the basis for providing management prescriptions at the operational (coupe) scale.
 - 3.1.2 The *Threatened Fauna Manual for Production Forests in Tasmania* and the *Threatened Fauna Adviser* program will be updated on a regular basis, as new information becomes available. In addition, the manual and program should be reviewed at least every 5 years, to coincide with the 5 yearly reviews under the RFA. The development and review of the manual and program and any updates will be subject to consultation among specialists within FPB and DPIWE, landowners and Forest Practices Officers. The manual and program and any changes will be subject to formal endorsement by the following bodies – the Director of the National Parks and Wildlife Service, the Scientific Advisory Committee established under the *Threatened Species Protection Act* and the Forest Practices Advisory Council established under the *Forest Practices Act*. Any proposed changes will be taken as endorsed by a body where that body has not responded within 3 months to a request for endorsement of a change. New site data that become available to the FPB will be added to the Threatened Fauna Manual (web version) as soon as practical after the site is received (within

2 weeks) to ensure that the most up-to-date information is available to the forest industry. Such alterations to the Threatened Fauna Manual do not require endorsement by the parties listed above. Specialists from DPIWE will supply relevant data on forest-associated threatened fauna, as the data become available.

- 3.1.3 Forest Practices Officers will consult *the Threatened Fauna Manual for Production Forests in Tasmania* (or up to date version in GIS format) to determine whether an operational area contains or is likely to contain threatened species.
- 3.1.4 The Forest Practices Officer will consult the *Threatened Fauna Adviser* to determine the appropriate endorsed management prescription and will seek further specialist advice from the Senior Zoologist of the FPB where required by the provisions of the *Threatened Fauna Adviser*.
- 3.1.5 Where an operational area contains or is likely to contain threatened species, the Forest Practices Officer will notify the Senior Zoologist of the FPB.
- 3.1.6 Where a Forest Practices Officer seeks further advice for a specific operational area in accordance with the *Threatened Fauna Adviser*, or where endorsed prescriptions are not appropriate for an operation, the Senior Zoologist of the FPB will consult with the DPIWE to determine an appropriate management prescription. This should involve consultation and negotiation among the specialists, the Forest Practices Officer and the landowner and may involve field inspections or surveys. Advice will be provided within 6 weeks, otherwise the Forest Practices Officer may proceed on the basis of best available information.

3.2 *Flora*

- 3.2.1 The *Forest Botany Manuals* will be the basis for providing management prescriptions at the operational scale.
- 3.2.2 The manuals will be updated on a regular basis, as new information becomes available. In addition, the manuals should be reviewed at least every 5 years, to coincide with the 5 yearly reviews under the RFA. The development and review of the manuals and any updates will be subject to consultation between specialists within FPB and the DPIWE, landowners and Forest Practices Officers. The manuals and any changes will be subject to formal endorsement by the following bodies – the Director of the National Parks and Wildlife Service, the Scientific Advisory Committee established under the *Threatened Species Protection Act* and the Forest Practices Advisory Council established under the *Forest Practices Act*. Any proposed changes will be taken as endorsed by

- a body where that body has not responded within 3 months to a request for endorsement of a change.
- 3.2.3 Forest Practices Officers will consult the manuals to determine whether an operational area contains or is likely to contain threatened species.
 - 3.2.4 Where an area contains or is likely to contain threatened species, the Forest Practices Officer will notify the Senior Botanist of the FPB to seek advice on management for the species.
 - 3.2.5 Endorsed management prescriptions will be developed and issued where possible for individual species or groups of species. “Endorsed management prescriptions” means endorsed by the Director of the National Parks and Wildlife Service, the Scientific Advisory Committee established under the *Threatened Species Protection Act* and the Forest Practices Advisory Council established under the *Forest Practices Act*. When the operation will follow an endorsed management prescription, the Forest Practices Plan can be determined in consultation with the FPB Senior Botanist without further consultation with DPIWE. Details of the site and operation will be provided by the FPB to DPIWE.
 - 3.2.6 Where standard endorsed prescriptions are not available or are not appropriate for an operation, prescriptions will be provided on a case by case basis. The development of these prescriptions should involve consultation and negotiation among the relevant specialists within FPB and DPIWE, the Forest Practices Officer and the landowner and may involve field inspections or surveys. Advice will be provided within 6 weeks, otherwise the Forest Practices Officer may proceed on the basis of best available information.
- 4 *Forest Practices Plans* - Once the Forest Practices Officer has obtained an endorsed management prescription, the officer will apply the prescription by incorporating appropriate provisions into the Forest Practices Plan for the area. The provisions of a certified Forest Practices Plan are legally binding on all parties who operate within the area covered by the plan for the duration of the plan. A permit for the purposes of s.51 of the *Threatened Species Protection Act* is not required where a Forest Practices Plan has been certified in accordance with these procedures.
 - 5 *Monitoring of compliance* – Compliance with the provisions of the Forest Practices Plan, including provisions that relate to threatened species, will be assessed by a Forest Practices Officer and a report on compliance will be lodged with the FPB within 30 days of the expiry of the plan, as required under s.25A of the *Forest Practices Act*. The Board will publish information on compliance in its Annual Report.
 - 6 *Independent audit and enforcement*– The Board will audit the standard of planning and the degree of compliance with the implementation of the provisions

of the Code and Forest Practices Plan, including those that relate to threatened species as part of its annual audit. Results will be published in the Board's Annual Report, as required under s.4 of the *Forest Practices Act*. Appropriate action will be taken with respect to instances of poor planning, or failure to comply with the provisions of a plan, in accordance with the provisions of the *Forest Practices Act*. Potential breaches of the *Threatened Species Protection Act* will be reported to DPIWE as soon as practicable.

- 7 *Monitoring of efficacy of prescriptions* – The Board in association with the DPIWE will monitor the efficacy of management prescriptions through a coordinated approach to research.
- 8 *Research* – The FPB and the DPIWE will consult with landowners and other stakeholders to determine the priorities for research into the ecology and management requirements of threatened species. Both bodies will coordinate an approach to secure appropriate levels of funding from all available sources. The forest industry recognises its role in contributing to research into the effects of forest management practices on threatened species. The forest industry will consider the research needs for threatened species as part of its overall contribution to forest practices research under the terms of the forest practices research fund.

These procedures are agreed:

.....

Chair

Forest Practices Board

Date:.....

.....

Director of the National Parks and Wildlife Service (pursuant to s.5 of the *National Parks and Wildlife Act 1970*)

Date:.....

Appendix C. Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBCA)

[The following is an extract from the first background document provided to the panel and should be read in conjunction with that document, especially with respect to cross-references].

Note: While this Act is Commonwealth legislation, it has direct bearing on the management of biodiversity in the State, and indirect bearing on the management of biodiversity under the current forest practices system so has been included here under State context.

Division 4 of the EPBCA states:

Division 4—Forestry operations in certain regions

Subdivision A—Regions covered by regional forest agreements

38 Part 3 not to apply to certain RFA forestry operations

(1) Part 3 does not apply to an RFA forestry operation that is undertaken in accordance with an RFA.

(2) In this Division:

RFA or regional forest agreement has the same meaning as in the *Regional Forest Agreements Act 2002*.

RFA forestry operation has the same meaning as in the *Regional Forest Agreements Act 2002*.

Note: This section does not apply to some RFA forestry operations. See section 42.

42 This Division does not apply to some forestry operations

Subdivisions A and B of this Division, and subsection 6(4) of the *Regional Forest Agreements Act 2002*, do not apply to RFA forestry operations, or to forestry operations, that are:

- (a) in a property included in the World Heritage List; or
- (b) in a wetland included in the List of Wetlands of International Importance kept under the Ramsar Convention; or
- (c) incidental to another action whose primary purpose does not relate to forestry.

KEY POINTS:

Forestry activities are essentially “exempt” from the referral process under the EPBCA because of the RFA but there are exceptions to these exemptions (dependent on the definitions of “forestry operations” and legal interpretation).

Changes to the operation of the forest practices system (e.g. management of threatened non-forest vegetation) are likely to not be exempt from the EPBCA, as currently circumscribed.

See also section on *Regional Forest Agreements Act 2002*, *Regional Forest Agreement*, *Community Forest Agreement* and Judge Marshall's decision.

Appendix D. Schedule 7 of the Tasmanian Forest Practices Act 1985

SCHEDULE 7 - Objective of the Forest Practices System of Tasmania

The objective of the State's forest practices system is to achieve sustainable management of Crown and private forests with due care for the environment while delivering, in a way that is as far as possible self-funding –

- (a) an emphasis on self-regulation; and
- (b) planning before forest operations; and
- (c) delegated and decentralized approvals for forest practices plans and other forest practices matters; and
- (d) a forest practices code which provides practical standards for forest management, timber harvesting and other forest operations; and
- (e) an emphasis on consultation and education; and
- (ea) an emphasis on research, review and continuing improvement; and
- (eb) the conservation of threatened native vegetation communities; and
- (f) provision for the rehabilitation of land in cases where the forest practices code is contravened; and
- (g) an independent appeal process; and
- (h) through the declaration of private timber reserves – a means by which private land holders are able to ensure the security of their forest resources.

Appendix E. Summary of Listing Statements and Recovery Plans for threatened species.

[The following tables are taken from DPIW's web page, A-Z species lists of currently listed species on the TSPA. Items in bold type are those considered forest-dependent by the author, and include any species included in the current version of the Threatened Fauna Adviser (this is mentioned because species such as the ptunarra brow butterfly are often considered to not be forest-dependent, but are considered so by the forest practices system because of potential effects on habitat by forestry related activities. Note that DPIW created and maintain their own list of threatened species the department considers to be forest-dependent].

RECOVERY PLANS

Recovery Plan Title	Species Scientific Name	Species Common Name
<i>Eucalyptus ovata-Callitris oblonga</i> Black Gum/South Esk Pine Communities Recovery Plan 2000-2004	<i>Eucalyptus ovata-Callitris oblonga</i>	Black gum/South Esk pine
Tasmanian Forest Epacrids Recovery Plan 1999-2004	<i>Epacris apsleyensis</i> <i>Epacris barbata</i> <i>Epacris exserta</i> <i>Epacris sp. aff. exserta</i> (Mt Cameron) <i>Epacris sp. aff. exserta</i> (Union Bridge) <i>Epacris glabella</i> <i>Epacris virgata sensu stricto</i> <i>Epacris virgata</i> (Kettering) <i>Epacris virgata 'var. autumnalis'</i> <i>Epacris acuminata</i> <i>Epacris grandis</i> <i>Epacris limbata</i>	
Threatened Tasmanian Lowland Euphrasia Species Recovery Plan 2000-2005	<i>E. phragmostoma</i> <i>E. amphisysepala</i> <i>E. sp. 'fabula'</i> <i>E. gibbsiae</i> ssp. <i>psilantherea</i> <i>E. gibbsiae</i> ssp. <i>kingii</i> <i>E. fragosa</i> <i>E. semipicta</i> <i>E. semipicta</i> <i>E. semipicta</i> <i>E. semipicta</i> <i>E. collina</i> ssp. <i>collina</i> <i>E. collina</i> ssp. <i>diemenica</i> <i>E. collina</i> ssp. 'Northwest Tasmania' <i>E. collina</i> ssp. <i>tetragona</i> <i>E. collina</i> ssp. 'tasmanica' <i>E. collina</i> ssp. <i>gunnii</i> v <i>E. collina</i> ssp. <i>deflexifolia</i> <i>E. scabra</i>	
Phebalium daviesii Recovery Plan 1996-2004	<i>Phebalium daviesii</i>	Davies' wax flower
Epacris stuartii Recovery Plan 1996-2005	<i>Epacris stuartii</i>	Stuart's heath
Tetratheca gunnii Recovery Plan 2001-2005	<i>Tetratheca gunnii</i>	Shy susan
Threatened Tasmanian Orchids Recovery Plan 2006-2010	70 species	70 species
Ranunculus prasinus Recovery Plan 2006-2010	<i>Ranunculus prasinus</i>	Tunbridge buttercup

Lomatia tasmanica Recovery Plan 2006-2010	<i>Lomatia tasmanica</i>	King's lomatia
Eucalyptus morrisbyi Recovery Plan 2006-2010	<i>Eucalyptus morrisbyi</i>	Morrisby's gun
Tasmanian Alpine Karst Flora Recovery Plan 2006-2010	<i>Oreoporanthera petalifera</i> <i>Sagina diemensis</i>	Hill oreoporanthera Pearlwort
Tasmanian Threatened Grasstrees Recovery Plan 2060-2010	<i>Xanthorrhoea arenaria</i> <i>Xanthorrhoea bracteata</i>	Sand grasstree Shiny grasstree

List of Fauna Recovery Plans

Recovery Plan Title	Species Scientific Name	Species Common Name
Sub-Antarctic Fur Seal and Southern Elephant Seal Recovery Plan 2004-2009 	<i>Arctocephalus tropicalis</i> <i>Mirounga leonine</i>	Sub-Antarctic Fur Seal Southern Elephant Seal
Recovery Plan for Albatrosses and Giant-petrels 2001-2005 	<i>Diomedea exulans</i> <i>Thalassarche melanophris</i> <i>Thalassarche cauta</i> <i>Thalassarche chrysostoma</i> <i>Phoebastria palpebrata</i> <i>Macronectes halli</i> <i>Macronectes giganteus</i> <i>Diomedea dabbenena</i> <i>Diomedea antipodensis</i> <i>Diomedea gibsoni</i> <i>Diomedea sanfordi</i> <i>Diomedea epomophora</i> <i>Diomedea amsterdamensis</i> <i>Phoebastria immutabilis</i> <i>Thalassarche impavida</i> <i>Thalassarche bulleri</i> <i>Thalassarche nov. sp.</i> <i>Thalassarche steadi</i> <i>Thalassarche salvini</i> <i>Thalassarche eremita</i> <i>Thalassarche chlororhynchus</i> <i>Thalassarche carteri</i> <i>Phoebastria fusca</i>	Wandering Albatross Black-browed Albatross Shy Albatross Grey-headed Albatross Light-mantled Albatross Northern Giant-Petrel Southern Giant-Petrel Tristan Albatross Antipodean Albatross Gibson's Albatross Northern Royal Albatross Southern Royal Albatross Amsterdam Albatross Laysan Albatross Campbell Albatross Buller's Albatross Pacific Albatross White-capped Albatross Salvin's Albatross Chatham Albatross Atlantic Yellow-nosed Albatross Indian Yellow-nosed Albatross Sooty Albatross
Threatened Tasmanian Eagles Recovery Plan 2006-2010	<i>Aquila audax fleayi</i> <i>Haliaeetus leucogaster</i>	Wedge-tailed Eagle White-bellied Sea-eagle
Orange-bellied Parrot Recovery Plan 1998-2002	<i>Neophema chrysogaster</i>	Orange-bellied Parrot
Ptunarra Brown Butterfly Recovery Plan 1998-2003	<i>Oreixenica ptunarra</i>	Ptunarra Brown Butterfly
Pedra Branca Skink Recovery Plan 2001	<i>Niveoscincus palfreymani</i>	Pedra Branca Skink
Swift Parrot Recovery Plan 2001-2005	<i>Lathamus discolor</i>	Swift Parrot
Burrowing Crayfish: Engaeus group Recovery Plan 2001-2005	<i>Engaeus Orramakunna</i> <i>Engaeus Spinicaudatus</i> <i>Engaeus Yabbimunna</i> <i>Engaeus Martigener</i>	Burrowing Crayfish
Forty-spotted Pardalote Recovery Plan 2006-2010	<i>Pardalotus quadragintus</i>	Forty-spotted Pardalote
Giant Freshwater Lobster Recovery Plan 2006-2010	<i>Astacopsis gouldi</i>	Giant Freshwater Lobster
Tasmanian Galaxiidae	<i>Galaxias pedderensis</i>	Pedder galaxias

Recovery Plan 2006-2010	<i>Galaxias fontanus</i> <i>Galaxias johnstoni</i> <i>Galaxias parvus</i> <i>Galaxias tanycephalus</i> <i>Galaxias auratus</i> <i>Paragalaxias mesotes</i> <i>Paragalaxias dissimilis</i> <i>Paragalaxias electroides</i> <i>Paragalaxias julianus</i> <i>Galaxiella pusilla</i>	Swan galaxias Clarence galaxias Swamp galaxias Saddled galaxias Golden galaxias Arthurs paragalaxias Shannon paragalaxias Great Lake paragalaxias Western paragalaxias Dwarf galaxias
Spotted Handfish Recovery Plan 1999-2001	<i>Brachionichthys hirsutus</i>	Spotted Handfish

LISTING STATEMENTS

Vertebrates (marine and Macquarie Island species deleted)

Species	Further Reading	Common Name	Group	Status Tasmania	Status C'wealth
<i>Pardalotus quadragintus</i>	Further Information Listing Statement Recovery Plan	Forty-spotted Pardalote	BIRDS	e	EN
<i>Litoria raniformis</i>	Further Information Listing Statement	Green and Gold Frog	AMPHIBIANS	v	VU
<i>Galaxias fontanus</i>	Listing Statement Recovery Plan	Swan Galaxias	FISH	e	EN
<i>Galaxias johnstoni</i>	Listing Statement Recovery Plan	Clarence Galaxias	FISH	e	EN
<i>Galaxias tanycephalus</i>	Listing Statement Recovery Plan	Saddled Galaxias	FISH	e	VU

Invertebrates

Species	Further Reading	Common Name	Order	Status Tasmania	Status C'wealth
<i>Allanaspides hickmani</i>	Listing Statement	Hickman's Pigmy Mountain Shrimp	SYNCARIDA	r	
<i>Costora iena</i>	Listing Statement	Caddis Fly (Great Lakes)	TRICHOPTERA	x	
<i>Diplectronea castanea</i>	Listing Statement	Caddis Fly (Mt. Field))	TRICHOPTERA	x	
<i>Diplectronea lyella</i>	Listing Statement	Caddis Fly (King River)	TRICHOPTERA	r	
<i>Diporochaeta pedderensis</i>	Listing Statement	Lake Pedder Earthworm	ANNELIDA	e	
<i>Ecnomina vega</i>	Listing Statement	Caddis Fly (Macquarie River)	TRICHOPTERA	r	
<i>Goedetrechus mendumae</i>	Listing Statement	Blind Cave Beetle	COLEOPTERA	r	
<i>Hickmanoxyomma cavaticum</i>	Listing Statement	Ida Bay Cave Harvestman	OPILIONIDA	r	
<i>Hickmanoxyomma gibbergunyar</i>	Listing Statement	Cave Harvestman (Mole Creek)	OPILIONIDA	r	

<i>Hydrobiosella armata</i>	Listing Statement	Caddis Fly (Mt. Wellington)	TRICHOPTERA	r	
<i>Hydrobiosella sagitta</i>	Listing Statement	Caddis Fly (St. Columba Falls)	TRICHOPTERA	r	
<i>Hydroptila scamandra</i>	Listing Statement	Caddis Fly (Upper Scamander River)	TRICHOPTERA	r	
<i>Idacarus troglodytes</i>	Listing Statement	Ida Bay Cave Beetle	COLEOPTERA	r	
<i>Leptocerus sounta</i>	Listing Statement	Caddis Fly (Macquarie River)	TRICHOPTERA	r	
<i>Mesacanthotelson setosus</i>	Listing Statement	Isopod (Great Lake)	ISOPODA	r	
<i>Mesacanthotelson tasmaniae</i>	Listing Statement	Isopod (Great Lake)	ISOPODA	r	
<i>Oecetis gilva</i>	Listing Statement	Caddis Fly (South Esk River)	TRICHOPTERA	r	
<i>Onchotelson brevicaudatus</i>	Listing Statement	Isopod (Great Lake & Shannon Lagoon)	ISOPODA	r	
<i>Onchotelson spatulatus</i>	Listing Statement	Isopod (Great Lake)	ISOPODA	r	
<i>Oreixenica ptunarra</i>	Further Information Listing Statement Recovery Plan	Ptunarra Brown Butterfly	LEPIDOPTERA	v	
<i>Orphninostrichia maculata</i>	Listing Statement	Caddis Fly (Wedge River)	TRICHOPTERA	r	
<i>Orthotrichia adornata</i>	Listing Statement	Caddis Fly (Derwent River)	TRICHOPTERA	r	
<i>Oxyethira mienica</i>	Listing Statement	Caddis Fly (Ouse River)	TRICHOPTERA	r	
<i>Pseudotyranochthonius typhlus</i>	Listing Statement	Cave Pseudoscorpion (Mole Creek)	PSEUDOSCORPIONIDA	r	
<i>Ramiheithrus kocinus</i>	Listing Statement	Caddis Fly (Corinna)	TRICHOPTERA	r	
<i>Schayera baiulus</i>	Listing Statement	Schayer's Grasshopper	ORTHOPTERA	e	
<i>Stenopsychodes lineata</i>	Listing Statement	Caddis Fly (Bluff Hill Creek)	TRICHOPTERA	r	
<i>Tasimia drepana</i>	Listing Statement	Caddis Fly (Huon & Picton Rivers)	TRICHOPTERA	r	
<i>Taskiria mccubbini</i>	Listing Statement - Pedder & McCubbins	Caddis Fly (Lake Pedder)	TRICHOPTERA	e	

	Listing Statement - General Caddis flies				
<i>Taskiropsyche lacustris</i>	Listing Statement - Pedder & McCubbins Listing Statement - General Caddis flies	Caddis Fly (Lake Pedder)	TRICHOPTERA	e	
<i>Tasmanipatus anophthalmus</i>	Listing Statement	Blind Velvet Worm	ONYCHOPHORA	e	
<i>Tasmanipatus barretti</i>	Listing Statement	Giant Velvet Worm	ONYCHOPHORA	r	
<i>Tasmanotrechus cockerilli</i>	Listing Statement	Cave Beetle (Mole Creek)	COLEOPTERA	r	
<i>Tasniphargus tyleri</i>	Listing Statement	Amphipod (Great Lake)	AMPHIPODA	r	
<i>Uramphisopus pearsoni</i>	Listing Statement	Isopod (Great Lake)	ISOPODA	r	

Vascular Plants

Species	Further Reading	Common Name	Order	Status Tasmania	Status C'wealth
<i>Acacia axillaris</i> *	Listing Statement	Midlands wattle	MIMOSACEAE	v	VU
<i>Allocasuarina duncanii</i> *	Listing Statement	Duncan's she-oak	CASUARINACEAE	r	
<i>Anogramma leptophylla</i>	Listing Statement	Annual fern	ADIANTACEAE	r	
<i>Argentipallium spiceri</i> *	Listing Statement	Spicer's everlasting	ASTERACEAE	e	CR
<i>Asplenium hookerianum</i>	Listing Statement	Hooker's spleenwort	ASPLENIACEAE	v	VU
<i>Barbarea australis</i> *	Listing Statement	Native wintercress	BRASSICACEAE	e	CR
<i>Baumea articulata</i>		Jointed twig rush	CYPERACEAE	r	
<i>Baumea gunnii</i>		Slender twig rush	CYPERACEAE	r	
<i>Bedfordia arborescens</i>	Listing Statement	Blanket leaf	ASTERACEAE	r	
<i>Bertya tasmanica</i> ssp. <i>tasmanica</i> *	Listing Statement	Tasmanian bertya	EUPHORBIACEAE	v	EN
<i>Blechnum cartilagineum</i>	Listing Statement	Gristle fern	BLECHNACEAE	v	
<i>Caladenia anthracina</i> *	Listing Statement Recovery Plan	Black-tipped spider orchid	ORCHIDACEAE	e	CR
<i>Caladenia dienema</i> *	Listing Statement Recovery Plan	Windswept spider orchid	ORCHIDACEAE	v	CR

<i>Caladenia lindleyana</i> *	Listing Statement Recovery Plan	Lindley's spider orchid	ORCHIDACEAE	e	CR
<i>Caladenia patersonii</i>	Listing Statement Recovery Plan	Paterson's spider orchid	ORCHIDACEAE	v	
<i>Caladenia saggicola</i> *	Recovery Plan Listing Statement	Sagg spider orchid	ORCHIDACEAE	e	CR
<i>Caladenia sylvicola</i> *	Listing Statement	Forest fingers	ORCHIDACEAE	e	CR
<i>Cheilanthes distans</i>	Listing Statement	Bristly cloak fern	ADIANTACEAE	e	
<i>Colobanthus curtisiae</i> *	Listing Statement	Curtis' colobanth	CARYOPHYLLACEAE	r	VU
<i>Conospermum hookeri</i> *	Listing Statement	Variable smoke bush	PROTEACEAE	v	
<i>Corunastylis firthii</i> *	Listing Statement Recovery Plan	Firth's midge orchid	ORCHIDACEAE	e	CR
<i>Cryptandra amara</i>	Listing Statement	Bitter cryptandra	RHAMNACEAE	e	
<i>Cryptostylis leptochila</i>	Listing Statement Recovery Plan	Small tongue orchid	ORCHIDACEAE	e	
<i>Cyathea cunninghamii</i>	Listing Statement	Slender treefern	CYATHEACEAE	e	
<i>Cyathea X marcescens</i>	Listing Statement	Skirted treefern	CYATHEACEAE	v	
<i>Diuris lanceolata</i> *	Listing Statement Recovery Plan	Large golden moths	ORCHIDACEAE	e	EN
<i>Diuris palustris</i>	Listing Statement Recovery Plan	Swamp diuris	ORCHIDACEAE	e	
<i>Doodia caudata</i>	Listing Statement	Small rasp fern	BLECHNACEAE	v	
<i>Eucalyptus morrisbyi</i> *	Listing Statement Recovery Plan	Morrisby's gum	MYRTACEAE	e	EN
<i>Euphrasia amphisysepala</i> *	Listing Statement Lowland Euphrasia Recovery Plan	Shiny cliff eyebright	SCROPHULARIACEAE	r	VU
<i>Euphrasia fragosa</i> *	Listing Statement Lowland Euphrasia Recovery Plan	Shy eyebright	SCROPHULARIACEAE	e	CR
<i>Euphrasia gibbsiae</i> ssp. <i>psilantherea</i> *	Listing Statement Lowland Euphrasia	Swamp eyebright	SCROPHULARIACEAE	e	CR

	Recovery Plan				
<i>Euphrasia phragmostoma</i> *	Listing Statement Lowland Euphrasia Recovery Plan	Hairy cliff eyebright	SCROPHULARIACEAE	v	VU
<i>Euphrasia scabra</i>	Listing Statement Lowland Euphrasia Recovery Plan	Yellow eyebright	SCROPHULARIACEAE	e	
<i>Euphrasia</i> sp. 'fabula'*	Listing Statement Lowland Euphrasia Recovery Plan	Masked cliff eyebright	SCROPHULARIACEAE	e	EN
<i>Hardenbergia violacea</i>	Listing Statement	Purple coral pea	FABACEAE	e	
<i>Hypolepis distans</i> **	Listing Statement	Scrambling ground fern	DENNSTAEDTIACEAE	v	EN
<i>Micranthemum serpentinum</i> *	Listing Statement	Serpentine micranthemum	EUPHORBIACEAE	v	
<i>Phebalium daviesii</i> *	Listing Statement Recovery Plan	Davies' wax flower	RUTACEAE	e	CR
<i>Philotheca freyciana</i> *	Listing Statement	Freycinet wax flower	RUTACEAE	e	CR
<i>Pneumatopteris pennigera</i>	Listing Statement	Lime fern	THELYPTERIDACEAE	e	
<i>Polyscias aff. sambucifolia</i>	Listing Statement	Elderberry panax	ARALIACEAE	v	
<i>Prasophyllum amoenum</i> *	Listing Statement Recovery Plan	Dainty leek orchid	ORCHIDACEAE	e	EN
<i>Prasophyllum apoxychilum</i> *	Listing Statement Recovery Plan	Tapered leek orchid	ORCHIDACEAE	e	EN
<i>Prasophyllum castaneum</i> *	Listing Statement Recovery Plan	Chestnut leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum favonium</i> *	Listing Statement Recovery Plan	Western leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum incorrectum</i> *	Listing Statement Recovery Plan	Golfer's leek orchid	ORCHIDACEAE	e	EN
<i>Prasophyllum milfordense</i> *	Recovery Plan Listing Statement	Milford leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum montanum</i>	Listing Statement Recovery Plan	Mountain leek orchid	ORCHIDACEAE	e	
<i>Prasophyllum olidum</i> *	Listing Statement Recovery Plan	Pungent leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum perangustum</i> *	Listing Statement	Knocklofty leek orchid	ORCHIDACEAE	e	CR

	Recovery Plan				
<i>Prasophyllum pulchellum</i> *	Listing Statement Recovery Plan	Pretty leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum pyriforme</i>	Listing Statement Recovery Plan	Graceful leek orchid	ORCHIDACEAE	e	
<i>Prasophyllum robustum</i> *	Listing Statement Recovery Plan	Robust leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum secutum</i> *	Listing Statement Recovery Plan	Northern leek orchid	ORCHIDACEAE	v	EN
<i>Prasophyllum stellatum</i> *	Listing Statement Recovery Plan	Ben Lomond leek orchid	ORCHIDACEAE	e	CR
<i>Prasophyllum tadgellianum</i>	Listing Statement Recovery Plan	Tadgell's leek orchid	ORCHIDACEAE	r	
<i>Prasophyllum tunbridgense</i> *	Listing Statement Recovery Plan	Tunbridge leek orchid	ORCHIDACEAE	e	EN
<i>Pterostylis atriola</i> *	Listing Statement Recovery Plan	Snug greenhood	ORCHIDACEAE	e	EN
<i>Pterostylis commutata</i> *	Listing Statement Recovery Plan	Midland greenhood	ORCHIDACEAE	e	CR
<i>Pterostylis cucullata</i>	Listing Statement Recovery Plan	Leafy greenhood	ORCHIDACEAE	e	VU
<i>Pterostylis cynocephala</i>	Listing Statement Recovery Plan	Swan greenhood	ORCHIDACEAE	e	
<i>Pterostylis grandiflora</i>	Listing Statement Recovery Plan	Superb greenhood	ORCHIDACEAE	r	
<i>Pterostylis pratensis</i> *	Listing Statement	Liawenee greenhood	ORCHIDACEAE	r	VU
<i>Pterostylis rubenachii</i> *	Listing Statement Recovery Plan	Arthur River greenhood	ORCHIDACEAE	e	EN
<i>Pterostylis tunstallii</i>	Listing Statement Recovery Plan	Tunstall's greenhood	ORCHIDACEAE	e	
<i>Pterostylis wapstrarum</i> *	Listing Statement Recovery Plan	Fleshy greenhood	ORCHIDACEAE	e	CR
<i>Ranunculus prasinus</i> *	Listing Statement Recovery Plan	Tunbridge buttercup	RANUNCULACEAE	e	EN
<i>Rhytidosporum inconspicuum</i>	Listing Statement	Alpine appleberry	PITTOSPORACEAE	e	
<i>Spyridium eriocephalum</i> var. <i>eriocephalum</i>	Listing Statement	Heath spyridium	RHAMNACEAE	e	
<i>Spyridium lawrencei</i> *	Listing	Small leaf	RHAMNACEAE	v	EN

	Statement	spyridium			
<i>Spyridium obcordatum</i> *	Listing Statement	Creeping spyridium	RHAMNACEAE	v	VU
<i>Tetratheca gunnii</i> *	Listing Statement Recovery Plan	Shy susan	TREMANDRACEAE	e	CR
<i>Thelymitra jonesii</i> *	Listing Statement Recovery Plan	Sky-blue sun orchid	ORCHIDACEAE	e	CR
<i>Thelymitra malvina</i>	Listing Statement Recovery Plan	Mauve-tufted sun orchid	ORCHIDACEAE	e	
<i>Thryptomene micrantha</i>	Listing Statement	Ribbed thryptomene	MYRTACEAE	r	
<i>Tmesipteris parva</i>	Listing Statement	Small fork fern	PSILOACEAE	r	