

ABBREVIATIONS

- BVD Biodiversity Values Database – see TFM and FVD – this integrated database and GIS mapping product is being developed at the same time as the TFA review and will wholly replace the hard copy TFM and online FVD
- DEWHA Commonwealth Department of the Environment, Water, Heritage and the Arts (previously known under various other names such as Department of Environment and Heritage), superseded during the preparation of this document by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC)
- DPIPWE Tasmanian Department of Primary Industries, Parks, Environment and Water, previously known as DPIWE (Department of Primary Industries, Water and Environment) and DPIW (Department of Primary Industries and Water) and referred to as such in most documentation related to the present review (e.g. *Forest Practices Code*, old versions of the TFA, etc.) – DPIPWE is used throughout
- EPBCA Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
- FPA Forest Practices Authority
- FPAC Forest Practices Advisory Council
- FPB Forest Practices Board of the Forest Practices Authority but the abbreviation is most commonly applied to the previous name of the agency now referred to as FPA (see also FPU) and used in the present version of the TFA
- FPC *Forest Practices Code 2000*, sometimes referred to as the code
- FPO Forest Practices Officer
- FPP Forest practices plan
- FPU First name of the entity now known as the FPA (usually seen in terms such as FPU Senior Zoologist and various historical documents)
- FT Forestry Tasmania
- FVD Fauna Values Database – see TFM and BVD
- IFS Inland Fisheries Service, in some older documents referred to as the IFC, Inland Fisheries Commission
- NVA DPIPWE’s Natural Values Atlas database
- PAMA public authority management agreement established under the provisions of the TSPA
- PCAB Policy and Conservation Assessment Branch, formerly Development and Conservation Assessment Branch (DCAB), of DPIPWE
- PSC Project Steering Committee for the review of the Threatened Fauna Adviser project, comprising: Sarah Munks (FPA), Phil Bell (TSS, DPIPWE), Clare Hawkins (TSS, DPIPWE), Karen Richards (FPA) and Fred Duncan (FPA, in part)
- RFA Tasmanian-Commonwealth Regional Forest Agreement signed in November 1997 and updated in 2005
- TFA Threatened Fauna Adviser
- TFM *Threatened fauna manual*, originally published as hard copy as the *Threatened fauna manual for wood production forests in Tasmania* (Forest Practices Board 2001) and subsequently converted to an online database on FPA’s web site and referred to as the Biodiversity Values Database (FPA 2011)

TSPA	Tasmanian <i>Threatened Species Protection Act 1995</i>
TSS	Threatened Species Section of the Department of Primary Industries, Parks, Water and Environment (see DPIPWE); previously known as the Threatened Species Unit (TSU)
SAC	Scientific Advisory Committee established under the TSPA
Utas	University of Tasmania

DEFINITIONS

All terminology used in the Threatened Fauna Adviser is in accordance with definitions as outlined in the Tasmanian-Commonwealth Regional Forest Agreement (1997), the *Threatened species strategy for Tasmania* (2000) and Tasmania's *Nature conservation strategy* (2001), unless otherwise defined below. These definitions have been modified slightly from those defined in *Planning guideline 2008/1: An internal planning framework developed by the Forest Practices Authority for the purposes of delivering management prescriptions through the Threatened Fauna Adviser to avoid or limit the clearance and conversion of significant habitat for threatened forest fauna* (FPA 2008).

Note: Knowledge of the known, core and potential range for each species (where relevant to a particular species) and potential habitat descriptions are critical to the functioning of the revised TFA. Concurrent with this review of the TFA, FPA and TSS have collaborated with specialists to delineate a set of agreed range boundaries for each species. These boundaries and habitat descriptions are available to planners via the FPA website (see Biodiversity Values Database) and DPIPWE's *Natural Values Atlas* database and reporting system.

Active nest (WTE and WBSE): A nest is called active if, during the breeding season, it has visible evidence of recent use. Evidence may include recent material added to the nest, a chick or an egg; or an adult bird observed close to the nest.

Aggregated retention (ARN): The main silvicultural system used to achieve the variable retention approach in tall, wet eucalypt forests.

Agreed procedures: The procedures agreed between the FPA and DPIPWE for the management of threatened species under the forest practices system, available on the FPA's website:

(http://www.fpa.tas.gov.au/_data/assets/pdf_file/0010/57718/FPA_DPIPWE_agreed_procedures_2010.pdf)

Biodiversity evaluations: Desktop and field assessment of a proposed operational area for biodiversity values.

Biodiversity evaluation sheets: A planning document for biodiversity values that must be completed by forest planners as part of the development of forest practices plans.

Biodiversity Values Database: A planning tool designed to assist forest planners to determine which threatened species or habitat requires consideration in the development of a forest practices plan. The BVD was previously known as the Threatened Fauna Manual and then the Fauna Values Database and is formally recognised as an endorsed planning tool in Section D3.3 of the Forest Practices Code. The BVD can be accessed on the FPA website at: http://fpa.tas.gov.au/fpa_services/planning_assistance/advisory_planning_tools/Biodiversity_values_database

Buffer: An area of intact vegetation, usually surrounding a central point (e.g. nest site, den site) for a nominated distance.

Catchment: An area or basin of land bounded by natural geomorphological features from which water drains and flows to a river, watercourse, lake, wetland or estuary.

CFEV project: Conservation of Freshwater Ecosystem Values (CFEV), a project initiative of the Department of Primary Industries, Parks, Water and Environment (DPIPWE). The project aim was to ensure that priority freshwater values are appropriately considered in the development, management and conservation of the State's water resources.

Chytrid fungus: A waterborne pathogen and potentially lethal frog disease. Chytridiomycosis is an infectious disease that affects amphibians worldwide. It has been implicated in the decline and extinction of frog species in NSW,

Victoria and Queensland in the past 15 years but its origin and its true impact on populations remain uncertain. The fungus can be transferred through water, mud, plants and frog and tadpoles themselves.

Clearfelling: The complete removal of all trees on an area of land, where the objective is to harvest the old stand and replace it with a new, even-aged stand that has maximum access to light, nutrients and water.

Conversion: In the meaning of 'clearance and conversion' as defined in s.3 of the *Forest Practices Act 1985*. It includes the clearance of native vegetation and its replacement with non-native vegetation, such as plantation forest (includes hardwood and softwood plantations), agricultural grasses and crops. It also includes clearance of native vegetation for urban and coastal sub-divisions, and other such purposes (i.e. non-forestry activities).

Core range: Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.

Coupe: An area of forest that is planned for timber harvesting as a single unit. It may contain more than one silvicultural objective, such as a number of discrete gaps or clearfells or a combination of both.

Coupe Context Unit: On State forest may be a notional 400ha unit around the coupe, or on private property may be a private property boundary and surrounding land-use context.

Coupe dispersal: The dispersal of coupe operations in time and space in the landscape.

DBH and DBHOB: DBH (diameter at breast height) and DBHOB (diameter at breast height over bark). The diameter of a tree trunk at breast height (1.3 metres above the highest point on the ground).

Decision-pathway: (in the TFA) the question-answer steps involved to arrive at a recommendation.

Endemic: Confined to a particular area, so that for example, a Tasmanian endemic species occurs naturally only in Tasmania.

Ephemeral: (waterbody) a wetland, spring, stream, river, pond or lake that only exists for a short period following precipitation or snowmelt. They are not the same as intermittent or seasonal waterbodies, which exist for longer periods, but not all year round.

Environment Protection and Biodiversity Conservation Act 1999: The *Environment Protection and Biodiversity Conservation Act 1999*, which relates to the protection of the environment and the conservation of biodiversity, and for related purposes.

Environment includes:

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) natural and physical resources; and
- (c) the qualities and characteristics of locations, places and areas; and
- (d) heritage values of places; and
- (e) the social, economic and cultural aspects of a thing mentioned in a, b, c or d.

Fauna: Native animals, whether vertebrate or invertebrate, in any stage of biological development and includes eggs and any part of the animal.

Forest: An area containing trees as defined in S.3 of the *Forest Practices Act 1985*.

Forest planner: A person who plans forestry operations within the forest practices system.

Forest practices: Defined as per the Tasmanian *Forest Practices Act 1985*, i.e:

- (a) the processes involved in establishing forests, growing or harvesting timber, clearing trees or clearing and converting threatened native vegetation communities; and
- (b) works (including the construction of roads and the development and operation of quarries) connected with establishing forests, growing or harvesting timber or clearing trees.

Forest Practices Act 1985: Provides for the administration of the forest practices system through the Forest Practices Authority.

Forest Practices Advisory Council (FPAC): A representative body of stakeholders that provide technical advice, established under the *Forest Practices Act 1985*.

Forest Practices Authority: An independent statutory body responsible for administering the Tasmanian forest practices system. The system regulates the management of forest and threatened non-forest vegetation on both public and private land.

Forest Practices Authority's Biodiversity Program: A research and advisory program of the FPA.

Forest Practices Code: A code established under the *Forest Practices Act 1985* which prescribes the manner in which forest practices must be conducted in order to provide reasonable protection of the environment. The most recent version of the code was released in 2000.

Forest Practices Executive Review Team: An expert panel whose role is to provide commentary on a project or output of a project (in this case the TFA) using their knowledge and expertise.

Forest Practices Officer: A person appointed under Sections 38 and 39 of the *Forest Practices Act 1985*.

Forest practices plans: A plan for forest operations as specified in Section 18 of the *Forest Practices Act 1985*.

Forest practices system: The system established pursuant to the objective set out in schedule 7 of the *Forest Practices Act 1985*.

Formal reserve: One of the following land categories: national park, nature reserve, conservation park, or other legislatively defined reserves for the purpose of conservation.

FPA planning guideline 2008/1: A framework to assist in planning so as to avoid the loss of significant habitat of threatened fauna through the conversion of native forest to other forms of land use (such as plantations, agriculture and infrastructure). The full title of the document is: *An internal planning framework developed by the Forest Practices Authority for the purposes of delivering management prescriptions through the Threatened Fauna Adviser to avoid or limit the clearance and conversion of significant habitat for threatened forest fauna*.

Ground-based assessment: A field assessment of an area of interest to determine the extent and quality of species habitat using the skill and experience of the forest planner and specialist assessment where needed.

Habitat: The area, locality, site or particular type of environment, or any part of them, occupied or used by any flora or fauna.

Habitat fragmentation: The emergence of discontinuities (fragmentation) in an organism's preferred environment (habitat), causing population fragmentation. Habitat fragmentation can be caused by environmental processes that slowly alter the layout of the physical environment, or by human activity such as land conversion, which can alter the environment much faster.

Habitat tree: A tree that has features of particular value to fauna, frequently including tree hollows. The term 'habitat tree' is often used in reference to trees that are retained on logging coupes for the purpose of providing special habitat for fauna. The code defines a habitat trees as a mature living tree selected to be retained in a coupe because it has featured of special value for wildlife (e.g. hollows). Habitat trees should be selected on the basis of size and the presence of hollows or the potential to develop hollows over time.

Hectare (ha): A metric unit of measurement equivalent to 10,000 m².

Informal reserve: Land protected through administrative instruments by public authorities.

Intact: It is a natural environment with no signs of significant human activity or habitat fragmentation, and of sufficient size to contain, support, and maintain the complex of indigenous biodiversity of viable populations of a wide-range of biota genera and species, and their ecological effects.

Interim recommendations: Management recommendations for threatened species that are being used to guide management decisions but have not yet been through a more formal endorsement process.

Karst: A landscape that results from the high degree of solubility in natural waters of the bedrock. Underground drainage, sinkholes and limestone caves are the best known components of karst.

Known locality: A location where a species has been previously recorded.

Known range (or actual range): is the area within which the species is most likely to occur, being the area of land within a minimum convex polygon of all known localities of the species. This term is synonymous with 'extent of occurrence' as referred to in the *Guidelines for the eligibility for listing under the Threatened Species Protection Act 1995* (DPIW 2009).

Landing: An area to which logs are pulled and where logs are loaded onto trucks, i.e. the working area for cross-cutting, sorting and loading of logs. This does not include areas used solely for stockpiling.

Listing statements: Brief documents providing distributional and biological data, recovery program information, actions carried out, actions required and illustrations. The quickest and most readily obtainable advice on threats and management of a particular species will be provided in Listing Statements. Listing Statements are used in place of Recovery Plans where the required recovery actions do not warrant preparation of a full recovery plan. Listing Statements are a formal requirement under the Tasmanian *Threatened Species Protection Act 1995*.

Machinery exclusion zone (MEZ): The zone (usually adjacent to a stream) where machinery is not permitted under the *Forest Practices Code*.

Management Decision Classification (MDC): A land classification system used by Forestry Tasmania. Under this system, land is divided into three primary zones: Production, Conditional and Protection, according to its availability for wood production. Refer to Orr & Gerrand (1998) for a full description of the MDC system.

Maternal den: Den chosen and occupied by female for the rearing of young.

Maternal denning season: Time of year when young occupy the den site.

Mature forest: Forests are classified as mature when they are about 100 years old and begin to develop structural features typically found in older forests.

Mature habitat availability map: A map showing the distribution of mature habitat availability classes (high, medium and low) across the landscape.

Minimise: Term used deliberately to allow flexibility in management approaches on a case-by-case basis. The use of the term does not imply provision for ignoring a recommendation. Rather, it is used to encourage formal documentation by a planner demonstrating how a recommendation can be met, or if it cannot be met, how an alternative solution meets the intent of the initial recommendation. In most cases where a recommendation cannot be met, a planner would seek advice from the specialists at the FPA to develop an acceptable solution.

Monitoring – effectiveness: Monitoring that is used to determine whether the management specified has achieved its objective.

Monitoring – implementation: Monitoring that is used to determine whether prescribed management is actually conducted.

Native vegetation: is all native forest and native non-forest vegetation.

Natural Values Atlas (NVA): A database administered by DPIPW, with a web-based interface that allows observations of Tasmanian plants and animals to be viewed, recorded and analysed.

Nest (bird): A container or shelter made by a bird out of twigs, grass, or other material to hold its eggs and young.

Notification: Submission of a proposed forestry operation to the Forest Practices Authority's advisory program for advice on the management of a special value – usually involved completing and submitting evaluation sheets.

Off-reserve: Areas outside the reserve system.

Operation area: Area where forestry operations are planned within a forest practices plan area.

Paddock tree: A tree around which the other components of a native vegetation community have been removed. Paddock trees may occur as isolated trees (e.g. single tree in a paddock, widely spaced single trees throughout a paddock, etc.) but also as small copses of trees (e.g. group of trees on a rocky patch of paddock) and narrow linear strips (e.g. patchy riparian strips, roadside strips, etc.). Although paddock trees usually occur in farmed paddocks, they can also be found along road reserves, in cemeteries, parks and urban areas.

Partial harvesting: Harvesting systems that include the retention of some trees e.g. advanced growth, seed tree, shelterwood, group and single tree selection – see *Native forest silviculture technical bulletin no. 5* for an overview of most silvicultural systems in Tasmania.

Permanent Native Forest Estate Policy: A policy resulting from the Tasmanian Regional Forest Agreement that commits the State of Tasmania to maintenance of native forest communities at the state and bioregional levels.

***Phytophthora cinnamomi*:** *Phytophthora cinnamomi* is a root fungus that can devastate drier forest and non-forest communities in lowland areas of Tasmania.

Photo-interpretation (PI): A technique to classify and map Tasmania's native forests by stereoscopic interpretation of aerial photographs which was developed in the late 1940s to facilitate systematic forest management.

Planning tool: An instrument to deliver information to forest practitioners on the approach to management of a species value in areas covered by the forest practices system.

Planning unit: An area considered in planning for forestry operations, which can be at any one of a number of scales. For example, a 'planning unit' may equate to an FPP area, single coupe, an entire property, or a forest block.

Plantation: A forest stand established by the planting of seedlings or cuttings of trees (usually a monoculture of hardwood or softwood species) selected for their wood producing properties and managed intensively for the purposes of future timber harvesting.

Potential habitat: All habitat types within the **potential range** of a species that are likely to support that species in the short and/or long-term. It may not include habitats known to be occupied intermittently (e.g. occasional foraging habitat only). Potential habitat is determined from published and unpublished scientific literature and/or via expert opinion, is agreed by the Threatened Species Section (DPIPWE) in consultation with species specialists. The description of potential habitat for species included in the BVD can be found on the FPA website under the 'habitat descriptions' tab at:

http://fpa.tas.gov.au/fpa_services/planning_assistance/advisory_planning_tools/Biodiversity_values_database

Potential range: Includes the known range, but also includes the area within which the species has not been found but may occur based on environmental conditions.

Private land: A land tenure arrangement where the land is permanently owned and not leased.

Project Steering Committee (PSC): Part of the project governance framework. The PSC may have a number of roles and responsibilities, such as approving project direction and expenses, ensuring project targets are met and resolving conflict.

Proposed FPP area: refers to an area under application for a forest practices plan. For the ease of readability in the recommended management actions delivered via the TFA, the term is usually simplified to 'FPP area' or 'FPP' (as applicable) but this does not imply that the advice confers approval of the "proposed" FPP. Note that the recommended management actions may require modifications to an area proposed for operations under an FPP, such that the proposed area is modified in its extent. In addition, constraints may be imposed on activities outside the proposed FPP area (e.g. seasonal exclusion zones, etc.).

Public land: Land as defined in Section 4 of the *Public land (Administration and Forests) Act 1991a* (Tas.) and land owned or leased by the Commonwealth.

Recovery plan: A plan made under section 25 of the *Threatened Species Protection Act 1995*, or under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, for any species of flora or fauna that is under threat of extinction.

Range boundary: A boundary encompassing the area in which a species is known to or could potentially occur. See definitions for potential, known and core ranges.

Reforestation: Natural or intentional re-stocking of forests that have been depleted or deforested.

Regeneration burn - high intensity (slash burn): A planned burn conducted under weather and fuel conditions that promote a fire of sufficient intensity to consume fuels for the purpose of forest regeneration or plantation establishment.

Regional Forest Agreement (RFA): Twenty year plans, signed by the Australian and certain state governments, for the conservation and sustainable management of certain areas of Australia's native forests.

Remnant vegetation: The native vegetation remaining from the 'original' forest or non-forest vegetation in a landscape after land clearance/alteration. A remnant can be of any size or condition, including individual trees, both live and dead. Remnants are generally patches at least one hectare in size.

Reserves: Informal and formal reserves that form Tasmania's Comprehensive, Adequate and Representative (CAR) reserve system (CofA and Soft 1997).

Riparian: Pertaining to the banks of streams, rivers or lakes.

Roost site: A perch on which birds rest or sleep.

Scientific Advisory Committee (SAC): The establishment of the Scientific Advisory Committee (threatened species) is provided for under section 8 of the *Threatened Species Protection Act 1995*.

Significant habitat: Habitat within the **known range** of a species that (1) is known to be of high priority for the maintenance of breeding populations throughout the species' range and/or (2) conversion, of which, to non-native vegetation is considered to result in a long-term negative impact on breeding populations of the species. It may include areas that do not currently support breeding populations of the species but that need to be maintained to ensure the long-term future of the species. Significant habitat is determined from published and unpublished scientific literature and/or via expert opinion, is agreed by the Threatened Species Section (DPIPWE) in consultation with species specialists. The description of significant habitat for species included in the BVD can be found on the FPA website under the 'habitat descriptions' tab at:

http://fpa.tas.gov.au/fpa_services/planning_assistance/advisory_planning_tools/Biodiversity_values_database

Silvicultural: The science and art of managing the establishment, composition and growth of forests.

Silvicultural systems: A regime of operations applied to a forest to produce or enhance forest values such as wood production, water yield, wildlife habitat, soils conservation and landscape aesthetics. In wood production forests a silvicultural system normally comprises a harvesting operation in conjunction with a regeneration treatment.

Snig tracks: A track along which logs are pulled from the felling point to a nearby landing.

Special Management Zone (SMZ): A land classification within Forestry Tasmania's Management Decision Classification (MDC) system that delineates areas to reflect additional management requirements for special values and uses (e.g. areas of high fauna or flora values such as habitat of threatened species).

Species: A population or group of individual flora or fauna that interbreed to produce fertile offspring or that possess common characteristics derived from a common gene pool.

State forest: Forest on public land that has been designated multiple-use forest by parliament, under the *Forestry Act 1920*. This land, which includes purchased land, is managed by Forestry Tasmania.

Stream class: Relating to size of the stream catchment, as follows (from the *Forest Practices Code*):

- Class 1: rivers, lakes, artificial storages (other than farm dams) and tidal waters – generally those named on a 1:100,000 topography map;
- Class 2: Creeks, streams and other watercourse from the point where their catchment exceeds 100 ha;
- Class 3: watercourses carrying running water most of the year between the points where their catchment is from 50-100 ha;
- Class 4: all other water courses carrying water for part of all of the year for most years.

Stream-side reserves: All land within a minimum horizontal distance specified in the *Forest Practices Code* from the banks of a Class 1, 2, 3 or 4 watercourse.

Swift parrot important breeding area (SPIBA): Swift Parrot important breeding areas that are known or suspected to have supported a large portion of the Swift Parrot breeding population in any given year.

Technical notes: Supplementary information and technical explanation for Forest Practices Officers on commonly encountered fauna management issues in production forests. Technical notes are advisory guidelines and do not constitute additions/alterations to the *Forest Practices Code*.

Threatened fauna includes all fauna species listed on Schedules 3, 4 and 5 of the *Tasmanian Threatened Species Protection Act 1995* and/or schedules of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Threatened Fauna Adviser (TFA): The Threatened Fauna Adviser is a decision-support system developed by the Forest Practices Authority, in consultation with DPIPW, specialists and the forest industry, to deliver management recommendations for forest-dependant threatened fauna in wood production forests.

Threatened Species Protection Act 1995: An Act to provide for the protection and management of threatened native flora and fauna and to enable and promote the conservation of native flora and fauna.

Threatened Species Section (TSS): A section of the Biodiversity Conservation Branch of the Department of Primary Industries Park, Water and Environment (DPIPWE).

Threatening process: Any process that, if continued, would pose a threat to the natural survival of any species of native flora or fauna.

Trees: are defined as per the *Tasmanian Forest Practices Act 1985* i.e:

(a) any woody plants with a height or potential height of 5 metres or more, whether or not living, dead, standing or fallen, that are –

(i) native to Tasmania; or

(ii) introduced into Tasmania and used for the processing or harvesting of timber; and

(b) tree ferns.

Variable Retention (VR): An umbrella term that describes an approach to harvesting and silviculture. VR is a relatively new silvicultural system that retains forest structural elements for at least one rotation in order to preserve environmental values associated with structurally complex forests.

Wildlife habitat clump: An area containing habitat trees set aside in a harvesting coupe to aid in the maintenance of fauna habitat diversity.

Wildlife habitat strip: Strips of uncut forest 100 metres in width, based on streamside reserves but including links up slope and across ridges to connect with watercourses in adjoining catchments.