

Additional information to support FPA biodiversity evaluation sheets

NOTE: This is explanatory information only and should not be included in the notification information sent to the FPA.

This document has been compiled to provide supporting information for anyone who is completing an FPA biodiversity evaluation sheet (all four sheets). Note that not all the topics are covered in all the evaluation sheets covering the different operation types.

Contents

Details to be sent to FPA Biodiversity Program 1

Explanatory notes for sections 1-6 of the native forest FPA biodiversity evaluation sheet 3

 Section 1: Vegetation communities 3

 Section 2: Priority species 4

 Section 3: Sites of potential significant for flora 5

 Section 4: Other flora issues 5

Phytophthora cinnamomi 5

 Weeds 5

 Remnant forest 5

 Hybridisation 6

 Effects on reserves 6

 Section 5: Mature forest habitat 6

 Assessment of mature habitat availability 6

 Wildlife habitat strips 7

 Wildlife habitat clumps 8

 Section 6: Threatened Fauna Species 8

Glossary 10

Details to be sent to FPA Biodiversity Program

When you require advice from FPA’s Biodiversity Program, you will need to upload your draft evaluation sheet and the following maps and information (when relevant):

1. Maps at 1: 10 000 map (or similar) indicating:
 - floristic and/or RFA vegetation types (as a minimum, the location and extent of any vegetation types with a high priority for conservation management at either the floristic or RFA level of classification must be shown)
 - PI types (or broad age class and level of disturbance)

- stream class (and any additional stream management prescriptions)
 - habitat types for threatened or priority fauna (as a minimum, the location and extent of any vegetation types representing suitable habitat for priority species)
 - location of any threatened or priority species within the proposed operation area or those that may be affected by the proposed operations (e.g. PC management issues; WTE nest issues – this should include consideration of carting routes)
 - distribution of any potential habitat for threatened species identified during field assessment
 - locations of wildlife habitat clumps (**Note: must be retained within the FPP area**), wildlife habitat strips, streamside reserves, or any other areas to be retained for biodiversity values or other special values
 - locations of retained aggregated prescribed under an aggregated retention silvicultural system, if applicable
 - harvest areas and silvicultural prescription to be applied
 - any specific prescriptions for flora and fauna (e.g. vegetation types and habitats proposed for exclusion, widened streamside reserves, etc.).
2. A 1:25 000 map showing the location of the proposed operation area, surrounding land use and mature habitat availability.
 3. Eagle nest search reports/maps (see [FPA Fauna technical note 1](#)) and LOS map if required.
 4. Specialist reports or advice, where available. This may include details of flora or fauna surveys conducted in the area (e.g. by FPA, FT, DPIPWE or consultants).

Note: For any operation involving native vegetation, the community distribution map should show the approximate route followed for the assessment of biodiversity values in the FPP area. If possible, locations where communities were specifically sampled or keyed out should also be shown – this is more important for communities of conservation interest (e.g. threatened communities).

The following information may also be useful to FPA specialists in some situations:

- aerial image (e.g. Google Earth) of FPP area, showing relevant features of the operation
- photographs of the coupe, particularly photos relevant to the biodiversity issue being referred to FPA.

Notes: If you are unsure of terms used in the evaluation sheet, check the glossary at the end of this document, or contact FPA Biodiversity Program.

Send FPP notification, biodiversity valuation sheet and supporting documents to FPA through the online [notification system](#). The notification database user manual is available [here](#). Use the additional details section on the first page of the online FPP notification form to indicate your reason for contacting FPA's Biodiversity Program, if it is not clear from information in the biodiversity evaluation sheet.

Explanatory notes for sections 1-6 of the native forest FPA biodiversity evaluation sheet.

Note: This information applies to the relevant sections in the other biodiversity evaluation sheets. It is explanatory information only and should not be included in the notification information sent to the FPA.

Section 1: Vegetation communities

Native forest vegetation – Table 1

- *Floristic communities:* Use the keys in section 2 of the [Forest botany manual](#) regional modules to identify floristic communities in the proposed operation area (after field inspection). Average sized native forest coupes will have three or more communities. Indicate the floristic priority for each community (A, B or np).
- *RFA communities:* Use the tables in section 2 of the [Forest botany manual](#) regional modules to determine the equivalent RFA communities, based on the identified floristic communities. Most coupes have fewer RFA communities than floristic communities. Indicate the conservation priority and area for each RFA community (Y, Yog or N). There is no need to give areas of individual floristic communities if they combine into one RFA community.

Note that the planned harvest area of each RFA community is needed for the FPP cover page.

Table 1: Vegetation Communities in the FPP area (EXAMPLE)

Floristic community	Floristic Priority (A,B,np)	RFA community	RFA Priority (Y, Yog, N)	Total in FPP area (ha)	Total in operation area (ha)
WET-OB010	np	Tall E. obliqua forest	N	12.5	11.5
WET-VIM0100	A	E. viminalis wet forest	Y*	7	0

Native non-forest vegetation – Table 2

- Use section 2 of the [Forest botany manual](#) regional modules to determine whether other native non-forest vegetation types occur in or adjacent to the proposed operation area. The FPA website has information sheets on [threatened non-forest communities](#) (note that all native non-forest vegetation communities are priority A communities).

Table 2 Native non-forest vegetation (EXAMPLE)

Community	Total in FPP area (ha)	Total in operation area (ha)
Lowland <i>Poa</i> grassland –seeking FPA advice on classification of the community (photos and map attached)	12	0

Exotic vegetation – Table 3

- List exotic vegetation (e.g. plantations, pasture) by categories used in the FPP coversheet database. Include brackenfields in this section. All exotic vegetation types are non-priority (N) communities.

Table 3: Exotic vegetation (EXAMPLE)

Exotic vegetation	Total in FPP area (ha)	Total in operation area (ha)
<i>Pinus radiata</i>	52	52
Other non-forest - Agricultural land	20	10

Section 2: Priority species

List any known localities of priority species that may be affected by the proposed operations. This includes all known sites within the FPP area, any sites potentially affected by associated activities (e.g. carting), and any known sites within 2 km of the FPP area that occur in similar habitats present in the proposed operation area. **It is essential to check a threatened species database for known records in or near the area (within a minimum distance of 2 km).**

Use section 3 of the [Forest botany manual](#) regional modules for information on threatened and priority species. Many threatened and priority species are distinctive and will be recognised by FPOs if encountered in the field, but others are seasonal or difficult to identify.

Table 4: Localities of threatened flora species, potential impacts and proposed management actions (EXAMPLE)

Species (scientific name)	Locality - give details e.g. in/outside operational area (give grid reference).	Potential impact from proposed operation (yes, no, unsure)? Give details.	Proposed management actions to mitigate potential impact (e.g. buffers, WHC).
<i>Thismia rodwayi</i>	Outside the operational area but within 100m of the boundary of the coupe. 492000mE 5234000mN. See attached map for locations.	Unsure. The known locality is outside the operational area but there is potential habitat within the operational area. A targeted survey has not been conducted.	Two WHCs will be placed over areas supporting potential habitat. See FPP map for location of WHCs.

Section 3: Sites of potential significant for flora

Use section 4 of the [Forest botany manual](#) regional modules (Table 4A and 4B) to determine if the FPP area supports any sites of potential significance for flora.

Table 5: Sites of significance (EXAMPLE)

Site of significance – include details such as size, location in the FPP area and associated values (e.g., threatened species locality or habitat)	Potential impacts from operations. Give details.	Proposed management actions – if required.
Dry eucalypt forest with grasstrees present. Grasstrees occupy an area approximately 1 ha in size. See map for location. Unsure if grasstrees are the threatened species.	Potential impact from selective harvesting over a threatened species site.	Seeking advice from FPA to confirm species. If threatened grasstree present the area will be captured within a WHC.

Section 4: Other flora issues

For other flora issues see section 5 of [Forest botany manual](#) regional modules.

Phytophthora cinnamomi

- Check FPA [Flora technical note 8](#) and section 2 of [Forest botany manual](#) regional modules for a list of PC-sensitive vegetation types and species.
- For operations on State forest, refer to Forestry Tasmania’s MDC mapping for PC management areas.
- Refer to FPA [Flora technical note 8](#) for PC management recommendations.

Weeds

The Forest Practices Code includes provision for the consideration of weed management in forestry operations. Please refer to the Code for guidelines on managing weeds. Use the box below to record any notes and/or management actions to be included for the management of weeds.

Remnant forest

Refer to section 5 of the [Forest botany manual](#) regional modules for a definition of remnant forest. Please note that a technical note is currently being developed to further define the values of remnant forest.

Table 6: Remnants, potential impact and proposed management actions (EXAMPLE)

Description of remnant (including size of remnant and location within the FPP area)	Potential impact from operation (provide details)	Proposed actions to manage potential impact
1 ha patch of wet <i>E. viminalis</i> forest within a <i>E. nitens</i> plantation proposed for harvesting. <i>E. viminalis</i> patch will be retained. See map.	Direct damage from tree felling and machinery.	Retain patch of <i>E. viminalis</i> . Use directional felling away from <i>E. viminalis</i> patch. Do not allow machinery to enter <i>E. viminalis</i> patch.

Hybridisation

Refer to FPA Flora Technical Note 12 provides information on which native eucalypts are susceptible to hybridisation with *Eucalyptus nitens* and how to recognise hybrid seedlings.

Effects on reserves

Reserves for the purpose of completing this section include

- Formal reserves (e.g. World Heritage Area, State Reserve, Forest Reserve)
- Informal reserves (that have been dedicated as such for their biodiversity values e.g. CAR informal reserves)
- Special Management Zones for Flora or Fauna
- Private land reserves (e.g. Private Forest Reserves Program, Protected Areas on Private Land, etc.)

Table 7: Reserve name, potential impact and proposed management action (EXAMPLE).

Reserve (name)	Potential impacts (e.g. disease, weeds, wildlings, fire, mechanical damage, disturbance to threatened species)	Proposed actions to manage potential impact (e.g. applying buffers, machinery wash down)
Forest Reserve. Located on eastern boundary of coupe.	Potential impacts from falling trees, weeds and regeneration burn.	A 20 metres buffer of intact native vegetation will be left between the reserve and the operation area.

Section 5: Mature forest habitat

Assessment of mature habitat availability

The FPA habitat context assessment tool is locate on the FPA website:

(http://www.fpa.tas.gov.au/fpa_services/planning_assistance/advisory_planning_tools/habitat_context_assessment_tool). This tool can be used to determine the area of land within a specified radius that is mapped as high or medium mature habitat availability. This tool enables planners

to assess the availability of particular habitat within the landscape surrounding a proposed harvest unit. It calculates the predicted availability of a particular habitat within a user-specified radius from a point locality (e.g. coupe central coordinates). The information delivered by this web-based tool can be used to make decisions on management actions within a particular operation area.

Table 8: Mature forest availability pre-harvest and area of mature forest proposed for harvest (EXAMPLE).

% of area within 1km of FPP centroid with high and/or medium mature habitat	% of area within 5km of FPP centroid with high and/or medium mature habitat	Area (ha) of mature forest proposed for harvest
17%	28.8%	5ha

Wildlife habitat strips

Section D3.2 of the *Forest Practices Code* and FPA [Fauna technical note 8](#) provide guidelines on the establishment and management of WHSs. WHSs have been established for most areas of State forest and some areas on private property. WHSs may need to be considered for larger private properties.

The following guidelines will be considered during FPP preparation involving **roading through a WHS**

- *The road should pass through the strip at right angles where practical, rather than diagonally or longitudinally. Operational issues (e.g. class of road, safety, topography, geology, slope, drainage) may impose constraints on the location of roads through WHSs. Note that where roads do not pass through at right angles, the shortest possible route should be found.*
- *The width of clearing of vegetation should be minimised where the road passes through the WHS (as a guideline, where practicable, the total width of vegetation clearing through a WHS should not exceed 15 m).*
- *Where the road passes through the WHS, trees should be felled parallel to the road and not into the adjacent intact vegetation, wherever practicable (or unless authorised by an FPO for safety or other operational reasons). Where a tree accidentally falls into the WHS a decision should be made by an FPO as to whether the tree will be pulled out or left in place (depending on the particular circumstances).*

The following guidelines will be considered during FPP preparation where operations are **adjacent to a WHS:**

- *The coupe should be designed to ensure that fires from high intensity regeneration burns do not enter the WHS. The FPP or burning plan may need to include additional prescriptions to minimise the risk of fire entering the WHS (e.g. scrub rolling, placing windrows as far as practical away from boundary).*
- *No trees should be felled into or out of the WHS unless authorised by an FPO for safety reasons. Where a tree accidentally falls into a WHS a decision will be made by an FPO as to whether the tree will be pulled out or left in place.*
- *No machinery should enter the WHS.*

Wildlife habitat clumps

Section D3.2 of the Forest Practices Code and FPA [Fauna technical note 7](#) provide guidelines on the establishment and management of WHCs. Specifically, the flow chart in the technical note should be used to answer the questions in section 2.3.

If WHCs are required, refer to FPA [Fauna technical note 7](#) for management guidelines. Indicate in section 3 the number of WHCs to be retained, the composition of the WHCs (if specific requirements are needed for priority fauna or due to silvicultural/operational issues), the location of the WHCs, or the approximate area of the proposed FPP area where WHCs will be required. If there has been an adjoining FPP area with previously retained clumps, ensure these clumps are retained by marking on the FPP map and flagging in the field. Note that WHCs must be retained WITHIN the area covered by the FPP.

Section 6: Threatened Fauna Species

This section deals with threatened species that may be affected by the proposed operations. This includes all sites within the proposed operation area, sites potentially affected by associated activities (e.g. carting), and sites adjacent to the proposed operation area that occur in similar habitats to those present in the proposed operation area (or as indicated in the [Threatened Fauna Adviser](#) e.g. within 500 m or 1 km line-of-sight of an eagle nest, within a catchment of threatened hydrobiid snails, etc.).

Consult the [Biodiversity Values Database](#) to determine whether or not the FPP area is within the range of a threatened species and to obtain information on known species locations and potential habitat descriptions. Use the [Threatened Fauna Adviser](#) to obtain a recommendation for each species listed in table 9.

Note that the Threatened Fauna Adviser may need to be used a number of times for each species:

- where there are several stream classes present (e.g. aquatic species)
- in an operation where there are several activities proposed (e.g. roading, harvesting).

Table 9: Threatened fauna species information (EXAMPLE)

Species	Known locality*	Range category	Potential and/or significant habitat**
Masked owl	Sighting record at 492000mE 5234000mN. 100m east of coupe boundary.	Core range	Significant habitat. Mature (C density) dry E. obliqua forest present in the eastern section of the FPP area. See map for location.

Table 10: Recommended management actions (EXAMPLE)

Species	ThFA recommendation number (more than one ThFA recommendation for a species may be required if the operation may impact a known locality and habitat)	List management actions delivered through the ThFA relevant to the operation	Can the management actions be applied? Provide details.
Masked owl	Rec 6	<p>Manage 20% of the area within 1km for potential habitat (preferentially significant habitat) through long term retention. Identify on planning map and flag in field.</p> <p>If a suspected nest or roost site is located within the operational area during operations, operations should cease within 100 m of the site and the FPA notified as soon as practical.</p>	<p>Yes. Significant habitat within the coupe is captured within WHCs and extended SSRs (total 25 ha).</p> <p>Potential and significant habitat 100 m north of the coupe captured within a formal reserve (name) (total within 1km is 35 ha)</p> <p>Potential habitat adjacent to the coupe (east) captured within LTR area (5 ha)</p> <p>Total area of significant and potential habitat within 1km of the coupe captured within long term retention is 65 ha (20% of area within 1km).</p> <p>See map for location of retained areas.</p>

Glossary

Threatened native vegetation community – a native vegetation community listed as threatened on the Nature Conservation Act 2002. A list of Tasmania's threatened native vegetation communities can be found on the FPA website:

http://www.fpa.tas.gov.au/_data/assets/pdf_file/0020/58070/Threatened_Native_Vegetation_Community_information_Sheet_-_Threatened_Native_Veg_Communities.pdf

Information on how to identify a threatened native vegetation community can be found in the [Forest Botany Manual](#).

Threatened flora species - a species listed as threatened on the Tasmania *Threatened Species Protection Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. A list of threatened species and listing statements and recovery plans can be found on the DPIPWE website:

<http://dpiipwe.tas.gov.au/conservation/threatened-species/lists-of-threatened-species/full-list-of-threatened-species>

Biodiversity Values Database - The Biodiversity Values Database delivers NVA locality data for threatened fauna and flora species in a user-friendly way and provides information on DPIPWE/FPA agreed threatened fauna species range and habitat descriptions for use in site assessments. The BVD can be access via the FPA website:

Hybridisation - Eucalypt species are often capable of cross-pollination within related groups. Such crossing, termed hybridisation, can result in viable hybrid offspring. FPA flora technical note 12 provides information on which native eucalypts are susceptible to hybridisation with *Eucalyptus nitens*, how to recognise hybrid seedlings and recommended monitoring actions.

Phytophthora cinnamomi (often called root rot fungus or cinnamon fungus) is an introduced pathogen that attacks the roots of many Australian plant species, including over 130 Tasmanian species. Information on the identification and management of *Phytophthora* can be found in the FPA Flora Technical Note 8: Management of *Phytophthora cinnamomi* in production forest.

Potential impact (direct) –direct potential impact is defined as physical damage or disturbance to a value (e.g., reserve, threatened vegetation community, stream, species habitat) caused by the activity. Examples of direct potential impact include (but are not limited to): felling trees into or out of a reserve, damage or removal of a threatened flora species, regeneration burn escaping into a reserve and causing damage, felling of trees into streambed).

Potential impact (indirect) – indirect potential impact is damage or disturbance to a value (e.g., reserve, threatened vegetation community, stream, species habitat) that results from the activity but is not direct potential impact. Examples of indirect potential impact include (but are not limited to): the spread of weeds or disease into a reserve during or after the activity, changes to stream ecosystems as a result of harvesting in a river catchment, changes in microclimate (e.g., drying out) to a sensitive vegetation community or wind throw of species habitat as a result of increased exposure to wind due to adjacent logging.

Remnant native forest - Remnant vegetation is the vegetation remaining in a landscape after land clearance/alteration. A remnant can be of any size or condition, including individual trees, both live and dead.

Reserve - Reserves include:

- Formal reserves (e.g. World Heritage Area, State Reserve, Forest Reserve);
- Informal reserves (that have been dedicated as such for their flora values e.g. CAR informal reserves);
- Special Management Zones for Flora of Fauna;
- Private land reserves (e.g. Private Forest Reserves Program, Protected Areas on Private Land, etc.)

Threatened fauna species - a species listed as threatened on the Tasmania *Threatened Species Protection Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. A list of threatened species and listing statements and recovery plans can be found on the DPIPWE website:

<http://dpiipwe.tas.gov.au/conservation/threatened-species/lists-of-threatened-species/full-list-of-threatened-species>

FPA 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.

Threatened Fauna Adviser - The Threatened Fauna Adviser (TFA) is a decision-support tool intended for use by those conducting biodiversity evaluations as part of the development of forest practices plans (FPPs) for activities covered by the Tasmanian forest practices system.

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

Operation area: Area in which operations are proposed, for example harvesting or reforestation or site prep, within the FPP boundary.

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

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.

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.