

# Threatened Species ADVISER

## TRAINING VIDEO

### TRANSCRIPT

#### **VIDEO 1: WELCOME AND COURSE OBJECTIVE**

>> Dydee: Hi, welcome to the threatened species adviser online training course. My name is Dydee and I am an ecologist at the Forest Practices Authority.

The threatened species adviser, or adviser, is an online planning tool for forest practices planners, where they can find tailored advice on managing threatened species of plants and animals that may occur in any area of Tasmania. Throughout this course we will refer to the threatened species adviser as the 'adviser'

In this course we will show you how to use the adviser, when undertaking the planning of forestry activities. It will help if you have some familiarity with the forest practices system, biodiversity evaluation process and threatened fauna adviser, but this isn't essential.

#### **[Section Title: What this course will cover]**

>> Angela: Hi, my name is Angela and I'm also an ecologist at the Forest Practices Authority. I'm going to quickly run through what this course will cover.

- We'll start off with some background on the forest practices system, biodiversity assessments and planning, and where the adviser fits in.
- We'll show you how to find out which species you may need to consider in your area, work out what habitats they live in, and demonstrate using this information to run the adviser.
- We'll go through a few flora and fauna examples, using the adviser to find specific management recommendations, and show you how these can be applied in practice.
- We'll give you some suggestions on supporting resources to help you use the adviser, and finally, we will conclude with an optional quiz to reiterate what you've learnt today.

#### **[Section Title: Goal of the course]**

Angela: After watching this video and completing the quiz you should be able to confidently use the threatened species adviser. This includes how to identify which threatened species require consideration, how to find their range and habitat requirements, how to obtain recommendations from the adviser and how to apply those recommendations in practice.

#### **VIDEO 2: CONTEXT OF THE THREATENED SPECIES ADVISER**

#### **[Section Title: What is Tasmania's Forest Practices system?]**

>> Angela: The Tasmanian forest practices system regulates forest practices on both public and private land. The *Forest Practices Act of 1985*, and Code of Practice embedded within it, are the primary pieces of legislation and policy that underpin this system.

Forest practices have a legal definition in the Act, and include activities like planting or harvesting forests, as well as building roads or quarries for the purposes of carrying out forest practices

The objective of the Forest Practices system is to achieve sustainable forest management with due care for the environment, whilst taking into account social and economic outcomes.

[Text on Screen]

### **[Section Title: Management of threatened species through the Forest Practices system]**

Angela: The *Forest Practices Code* is the practical document that outlines how to conduct forest practices in a way that provides due care to the environment. The Code is legally enforceable under the *Forest Practices Act* through Forest Practices Plans, or FPPs, which must be prepared in accordance with the Code and associated planning tools.

The adviser is one of the planning tools referred to in the Code.

The advice in those planning tools is jointly developed using the latest scientific knowledge, by the Forest Practices Authority and the Tasmanian government's Department of Environment This is to ensure that the advice provided in the planning tools jointly meets the requirements of relevant forestry and threatened species law.

### **[Section Title: What is the Threatened Species Adviser?]**

>> Dydee: The adviser is a tool that helps users to find the best way to manage threatened species and their habitat when planning forest practices. It's designed to provide tailored, practical instructions for forestry operations that ensures that threatened species and associated habitat is maintained across the landscape over time.

It's made up of a series of decision pathways; one for each listed forest dwelling threatened species – it includes over 500 species! Current scientific and expert knowledge on all the listed threatened species has been distilled into a series of simple questions that ask the user about the proposed forestry operation so that the user can retrieve a practical, species-specific management recommendation.

This tool originated in the late 1990s, when it only covered fauna. The tool has now been expanded to include both fauna and flora and has become the Threatened Species Adviser.

### **[Section Title: Forest Practices Plan (FPP) planning process]**

Dydee: So where does the adviser fit into the planning process? It sits in the biodiversity part of the suite of special values assessments that all planners must carry out when planning forest practices.

The process for biodiversity special values assessment and planning starts with a desktop evaluation. This is where we get an idea of what biodiversity values we might have on-ground in our planning area.

The desktop evaluation will give us a list of the species that are, or might be in our area, and the habitats that those species usually occur in. Our next job is to complete a field survey of your planning area to see if any of those threatened species or their habitats are present.

Once we have confirmed that we definitely do, or are likely to have habitat for a species in our planning area, the next step is to work out what to do about it, using the FPA planning tools. This is where the adviser fits into the process - the adviser is the tool that we, and you, use to find the management recommendations for a particular operation type for each threatened species.

Case-specific management prescriptions are then developed for the plan area from the recommended actions, and included in the FPP.

These management prescriptions are then implemented during the forestry operation.

The implementation of these management prescriptions are monitored through compliance certificates, the FPA's Compliance Auditing Program and also in projects undertaken by the FPA's Biodiversity Program.

Monitoring of the effectiveness of the management actions is also done, through the Biodiversity Research Program, to make sure these recommendations are actually helping the threatened species in the way we think they are. The results of both of these types of monitoring are used to evaluate the effectiveness of the whole system, and to continually improve it.

### **VIDEO 3: USING THE THREATENED SPECIES ADVISER**

#### **[Section Title: Running a Threatened Species Adviser session]**

>>Angela: Now we will go into detail about how to use the Threatened Species Adviser.

There are three basic processes involved in using this tool;

- 1) Identifying relevant threatened species for your area
- 2) Obtaining a recommendation from the adviser, and
- 3) Applying that recommendation

#### **[Section Title: Process 1: Identifying relevant threatened species]**

Angela: Once we know where we want to carry out forest practices, and what type of operation we are planning, we are ready to start identifying which threatened species are relevant to the operation.

Step 1 is to access an appropriate database to identify which threatened species are likely to be present in our proposed planning area.

We recommend the use of our online Biodiversity Values Database also known as the BVD. The BVD provides information on threatened species known localities, predicted ranges and the habitat in which the species may occur. The BVD can be accessed through the biodiversity planning page on our website. For more information on how to use the BVD click the question mark button here to access the user manual. You can also use other online databases like the Natural Values Atlas.

A BVD report will provide you with a list of the known sites of threatened species in the area, as well as a list of the species whose predicted ranges overlap with your planning area. You'll need to examine the habitat descriptions for each of these.

The next step is a field assessment, to see if what's in the planning area matches the descriptions provided in the BVD report. If the BVD report says a threatened species has been recorded in the coupe, we need to check that site. Also, if the BVD report gives a potential habitat description for a species of wet forest, or riparian areas, or trees with hollows, we need to check and see if the coupe contains that habitat. A field assessment is a really important step to determine the presence, extent and suitability of habitat, confirm sites and to identify any potential management issues.

A planning area may support several threatened species and it's your responsibility to ensure that the most up to date information is used in planning.

When we have the database report and we have done a field survey to record what habitat is present in the planning area, we will be able to use the adviser.

### **[Section Title: Accessing the adviser]**

>>Dydee: The adviser is accessed via the FPA's website and can be found by navigating to the planning page here, and then clicking on biodiversity. This page links all the biodiversity planning tools and supporting documents. The adviser can be accessed by clicking here.

The adviser is divided into two sections, one for threatened fauna and one for threatened flora. You can navigate to either by clicking flora or fauna here under the question What are you seeking management advice on? We click continue to progress.

### **[Section Title: Process 2: Obtaining a recommendation]**

On this screen, read the text on the caveats and user obligations and click on 'Continue' if agreeing to the terms of use. It is important that these terms are read and the step is completed.

On this screen select the operation type most applicable to the situation. There are three options to choose from which include:

- Forestry operations: this is for all standard forestry activities such as native forest silviculture, construction of roads and quarries for the purposes of forest practices, management of existing plantations, or establishment of new plantations. This option will take us to the next step of the adviser.
- The next option is Activities not classified as a "forestry operation". This option includes things like the clearing of native forest to convert it to pasture, and/or clearance and conversion of threatened native vegetation types. This option will take us straight to a recommendation which is always to contact the FPA for case-by-case advice.
- The final option is Activities on islands (excluding Bruny Island). Choose this for any proposals (whether standard forestry operation or some form of land clearing) on islands such as King Island, Flinders Island and others but not Bruny Island. Like the previous option this will take you straight to a recommendation which is always to contact the FPA for case-by-case advice.

When we have made a selection we click 'Continue'. For this example we will select 'forestry operations'.

On the next screen, we enter our name and the coupe or specific operation identifier. This should be detailed enough to allow both yourself and auditors to be able to track who used the adviser, and what coupe or operation or FPP it was used for. We then click 'Continue' when these details have been completed.

We then land on this 'species selection' screen which includes lists of all the threatened flora or fauna species (depending on which tool is selected).

We then select the species for which we need to obtain a recommendation, and click 'Continue'. We can scroll down the list by using the scroll bar on the right hand side, or input the species name to shortlist the options. We can only select one species at a time.

We will need to return to this screen for each of the species that may be affected by the proposed forestry operation.

Now we have seen how to select a species, we will run through a couple of examples.

### **[Section Title: Flora example – *Blechnum cartilagineum*]**

>> Angela: Let's start by taking a look at threatened plants through an example. Our scenario is that we have a planned clearfall, burn and sow operation in wet *Eucalyptus obliqua* forest near Penguin in northern Tasmania.

Looking at the BVD report for the area we can see that there are some records of threatened flora within 2km of the planning area centroid, these are the bright green triangles. Starting at the top of the list we have *Blechnum cartilagineum*, commonly known as the gristle fern. So we will use this species to look at how the adviser works.

Looking closer at these records, we can see that there are about 10 records of gristle fern right inside our planning area. We are therefore highly likely to have an impact on this species. It also means that there may be more of them around if we have suitable habitat within our planning area.

Angela: As discussed earlier in the course, one of the key steps in the planning process is to undertake a field assessment of the planning area, which will include checking the known sites to see if the gristle fern is still there, and looking in suitable habitat to see if there are more sites than the ones on the database. We can use the habitat description and survey guidelines from the BVD report to determine the best areas and time of year to search for the fern.

You can see here that this species favours sheltered sites along creeklines in northern and eastern Tasmania and is found in sites within both dry sclerophyll and wet sclerophyll forest. So we will focus our searches along the sheltered creek inside our planning area. The survey guidelines here say that we can search at any time of year.

We checked the known sites and confirmed that the fern is still present, and checked suitable habitat in our planning area and found one additional locality. Now we are ready to run the adviser to determine the relevant management advice.

Angela: Jumping back into the adviser as shown previously, we select flora, follow through the steps of agreeing to the terms of use, selecting forestry activity as that is the operation type in this example and filling in our user details. Now we have reached the list of species. Threatened plants species are listed by scientific name only. We can scroll to the species alphabetically on the page or can navigate using the search bar. If I type in *Blechnum* there are three species in this genus that are threatened in Tasmania, for our example I select the species relevant to our operation and click continue at the top or bottom of the page.

We have now come to our first question or 'decision', Do you have a known site for this species? In the adviser a known site is when a database record or your own field observation record falls immediately adjacent to, or within the boundary of the operational area. We can answer yes to this question as we had multiple records of the species in our operational area in the BVD report, which we confirmed were present during our field assessment. Then click continue.

We then come to the question What is the planned operation type? As mentioned earlier the operation type is a clearfall burn and sow operation in wet *Eucalyptus* forest. Therefore we select native forest silviculture as our planned operation type.

Then click continue. This is where we get our recommendation.

The top line here is the name of the recommendation. The group number refers to the management group for the plant species. With just under 500 flora species to take into consideration when developing the adviser, it was impractical to create and manage individual decision pathways and recommendations for every species. Therefore species had to be grouped. Each species has been placed into one group depending on the factors such as distribution, ecological function and risk of forestry-related disturbance. *Blechnum cartilagineum* is in management group 2, which has species that have demonstrated or are expected to have some level of tolerance to disturbances related to timber harvesting and regeneration, but have one or two aspects of their distribution, ecological requirements or life history that require additional management consideration.

Next is the management objective. For this species the management objective is to implement actions that will maintain the species across its range, with particular emphasis on avoiding high impact disturbances to known sites. This objective reflects the group the species is in.

Continuing down the recommendation, for *Blechnum cartilagineum* there are a list of recommended actions that you must do to effectively manage this species.

The advice asks the user to map the extent of the species within the FPP planning area, and once these sites are mapped, the harvest boundaries for the operation can be tweaked to retain the local population including both the population occurring within and adjacent to the FPP area. The recommendations also advise that landings and snig tracks are located in a way that avoids or minimises disturbance to dense patches and individual plants. Once again mapping the local population is key to being able to do this. Lastly the advice asks that if more than 10% of the local population is lost or removed from the planning area to contact the FPA for more advice. These are the recommendations that will be applied in the forest practices plan, but more on that later.

The section below is the caveat for the recommendation, found on all recommendations in the adviser. And finally right at the bottom here are your automatically generated user details, including name, location, the time you accessed the adviser and what version it is.

These are an important record of the currency of the recommendation you have chosen. These details can be checked in a compliance audit to ensure you selected the correct recommendation at that point in time, even if that recommendation has changed since the time when you planned your operation.

### [ Section Title: Fauna example – *Engaeus orramakunna* ]

>> Dydee: Now that we've looked at an example of a threatened plant, let's jump into threatened fauna. For this example we have a harvesting operation for a pine plantation in the Lisle area, in the north east of the state. We have used the centroid of the planning area

to generate a BVD report. Looking at the report for this area you can see that we have quite a few records of threatened fauna including the Mt Arthur Burrowing Crayfish, or *Engaeus orramakunna*. this is the species we will run through now.

Like the previous example we agree to the terms of use, then select forestry activity, as that includes plantation forestry, and again we fill out our details. Here we are at the list of fauna species. Unlike threatened plants, threatened fauna species are listed by common name and scientific name. Once again we can use the search bar to navigate to the species like this using either common name or scientific name. Alternatively we can scroll to the species, with the fauna listed alphabetically by common name. So then we select our species and click continue.

The first question we come to is which range are you in for this species? To answer this question we need to go back to the BVD report and see what range our plantation coupe is in for the Mt Arthur Burrowing Crayfish. This is listed here in the range class column and as you can see it is 'known range' So we select the option 'core or known (or presence is assumed)' and click on continue.

The next question for this species is does the proposed operation area (or area within 100m) contain potential habitat? This is where the habitat description from the BVD report is important. The habitat description says that this species likes poorly drained areas. Our coupe contains streams and a boggy section, so it matches the description of potential habitat. The answer to this question is therefore 'yes' – now click continue.

We then come to the question What is your proposed operation type? In this example we described the scenario as harvesting of a pine plantation, which is a form of plantation management. So for operation type we select plantation management and click continue.

Here we have reached our recommendation, which is recommendation 4 for Threatened Burrowing Crayfish. On this screen you can see the pathway we took to get the recommendation which was within core or known range; potential habitat present; plantation management.

Like the threatened plant example, the recommendation starts with an objective, includes practical management recommendations, and concludes with a caveat.

If you look a bit closer at the management advice in the recommendation, you can see it is divided into two different sections – one for the planning phase, and one for the management of streams.

The planning advice includes things like making sure the plan is in accordance with the plantation management sections of the *Forest Practices Code* (which include careful stream management), ensuring adjacent areas are not harvested in a short space of time (or coupe dispersal), and asking planners to map streams, boggy areas and any crayfish burrows that may be present.

The class 1-4 stream management advice in this recommendation includes things like excluding machinery from streams and streamside reserves, to reduce the impact of machinery on the crayfish living in the soil beside the streams. The recommendation also advises planners to retain any native vegetation on the streams to maintain the crayfish's preferred microclimate, and avoid the use of any residual chemicals near the streams.

At the end of the recommendation are the guidelines for plantation operations on class 4 streams with high fauna values. As this area has records of a threatened stream dwelling species, it has high fauna value. These guidelines provide practical advice for the cultivation stage of the operation, which varies depending on your slope. Our operation is on a relatively flat area with a slope of less than 11degrees, so we follow the advice for flat land. In this case, it recommends that no cultivation should occur within 10 m of class 1, 2 and 3

streams or within 5 m of a class 4 stream, but spot cultivation can occur next to class 4 streams within the 5-10 m zone.

### **[Section Title: Audit Details]**

Dydee: Scrolling down, we come to the same caveat as the flora example, and the automatically generated audit details appear, with your name and coupe identifier. Remember to retain these details to demonstrate that you used the right recommendation in the adviser for the time at which you were planning.

### **[Section Title: Process 3 – applying the recommendation]**

>> Angela: Once you have a recommendation for your species the next step is to use it to develop management prescriptions appropriate to the operation and incorporate them into the FPP. It is the planner's responsibility to ensure that a certified FPP includes all relevant actions required for threatened species. This may require multiple recommendations to be considered (for example, if roading and harvesting in one area).

The prescription in the FPP should be worded so that the action is clear to those who are responsible for implementing the FPP on the ground, including contractors or supervisors. Transferring all of the wording from the adviser recommendation word-for-word into an FPP is often not appropriate and you'll likely need to select or modify the wording of the recommendation to suit the context of your planning area. Rephrasing of the recommendation is acceptable provided that the management objective is still met.

We will take you through an example using the Mount Arthur Burrowing Crayfish from the previous section.

In this situation, the adviser recommendation includes instructions on buffering of all stream classes. In our imaginary coupe, we only have class 3 and 4 streams present, so don't need to include the stream buffer sizes for class 1 and 2 streams from the plantation establishment section of the Forest Practices Code. We are also operating only on flat land, so do not need all the guidelines for steep land cultivation. Including all of the extra unnecessary recommendations as FPP prescriptions clogs up an FPP document and makes it less clear for the contractors carrying out the instructions.

The key take home message from this is not to copy-and-paste the recommendation word for word, but to instead re-word it to suit the context of your FPP.

You can contact the FPA for further advice

- If the recommendations in the adviser can't be implemented for some reason or;
- If a variation is made to the FPP that affects threatened species, and the change is not covered by the FPP prescriptions or updated adviser recommendations or if they cannot be applied) or;
- If more threatened species values are identified in the FPP area after completing the biodiversity evaluation – for example you find more crayfish burrows, or discover a threatened plant species in your area.

### **VIDEO 4: OTHER SUPPORTING RESOURCES**

>> Dydee: To help support you when using the Threatened Species Adviser, the FPA have developed a range of documents and associated tools. These can be found on the FPA website, under the biodiversity section.

We will quickly run you through some of these resources and how they can support you when using the adviser.

### **[Section Title: The Biodiversity Values Database (BVD)]**

Dydee: First up is the Biodiversity Values Database, which we looked at earlier. The BVD is a partner tool to the adviser and allows you to search the location around your forest planning area to retrieve a list of the threatened flora and fauna that may be present. When you undertake a BVD search using coordinates or the 'target' button to set your centroid, you will get a report with the following information.

- A list of all threatened fauna with range boundaries that overlap your centroid coordinates, including the range category and a description of the potential and significant habitat for that species.
- A list of the threatened fauna records within 5 km of the centroid coordinates. These come directly from the NVA database. The BVD filters these to exclude those records that do not influence forest practices management (so you won't see threatened whale species records appearing)
- You also get a list of threatened flora records within 2 km of the centroid coordinates, from the NVA
- And for each of those threatened flora species, a list with habitat descriptions and Threatened Flora Survey Notes, as well as an indication of the botanical skill level required to survey for that species.

These lists contain important information about the species records, like the records accuracy, coordinates, observation date, conservation status, survey guidelines and survey skill level. You can click on any of the column titles to sort them.

>>Angela: You can actually access this information anytime by going to the BVD page on the FPA website and here you can find the full list for all species including fauna habitat descriptions, flora habitat descriptions, flora survey guidelines, the latter of which have been combined into a single document.

>> Dydee: The BVD also has a map for eyeballing the location of flora and fauna records and you can turn on additional layers such as threatened fauna range boundaries, TasVeg, tenure type, and the FPA's wedge-tailed eagle habitat models and mature habitat layer. Clicking on a record on the map will highlight it in the table, and vice versa.

The BVD reports can be downloaded as pdfs, or as spreadsheets by clicking the Save as CSV button here at the bottom of the page. The reports can also be printed using the Print Report button here at the top of the page.

The information from the BVD reports allows planners to target the threatened species in their planning area when using the adviser.

### **[Section Title: FPA Flora and fauna technical notes]**

Dydee: The FPA have developed a whole range of flora and fauna technical notes to assist with habitat identification, survey techniques, and the application and implementation of recommendations to manage threatened species habitat. Many of the adviser recommendations will point you to further information in a technical note to help you implement the recommendation.

These are practical, descriptive documents, usually with helpful photos or diagrams and they're designed to be used by practitioners in the field. They can help you distinguish the

threatened species of tree fern from the more common one. They can help you identify the different types and different densities of swift parrot breeding habitat, so you can apply the adviser recommendations. They can help you design a survey for threatened stag beetles, to inform your proposed management for an operation or they can help you work out how many wildlife habitat clumps you need in a clearfall or selective harvesting operation and where to place them.

### **[Section Title: Threatened Flora Habitat Suitability Models (HSM)]**

>> Angela: Another layer on the BVD, which helps with use of the adviser and the FPP planning process are the Threatened Flora Habitat Suitability Models. These models are for 46 of Tasmania's most vulnerable and at risk threatened flora species. The models are essentially "heat maps" that indicate the likelihood that an area contains suitable habitat for a species. The models are based on known records of the species and a combination of environmental factors that influence plant distribution.

They basically act like a potential range boundaries for plants.

Planners can use these models to decide where to target flora surveys. If you have a known site within 2km of your planning area, and your adviser recommendation for the species is to undertake a survey, then use the appropriate model to determine where you need to survey.

Areas of moderate, high and very high suitability that fall within an operational area indicate the areas of highest priority for surveying for the target species. These models can be used in combination with the information from a BVD report we just discussed such as known records, *Habitat Descriptions* and *Survey Notes*. In combination, these resources allow forest planners to target priority areas for species when undertaking harvest area surveys.

Flora technical note number 13 gives a full run down of how the models were developed and exactly how to use them.

### **[Section Title: Other supporting resources]**

Angela: The FPA also has a suite of documents to assist you when using the adviser, and for FPP planning in general.

These include the adviser user manual, which contains instructions on how to use the adviser and a glossary of terms and abbreviations in the tool. This can be accessed by clicking the help button in the adviser, or on the adviser landing page of the FPA website.

Also on this page are the background documents with information on how the adviser was developed and reference lists on the information used in the adviser. You can also access the Forest Botany Manual, used to classify floristic communities which can be helpful for identifying threatened species habitat. The FPA Threatened Fauna Habitat Planning guideline is here also, which provides specific information and advice on threatened fauna species at risk from land clearing. There is a guide to the flowering times of Tasmanian orchids, a plant identification kit, an information guide for tree hollows, and more. Take the time to explore these resources.

Finally the FPA biodiversity program ecologists are always on hand to assist with any questions relating to the adviser, whether it be how to use the adviser, applying recommendations or just overall queries relating to FPP planning for biodiversity.

## **VIDEO 5: ASSESSMENT AND CLOSING**

>> Angela: We've prepared a short quiz for you to test your knowledge on the adviser. The quiz isn't compulsory, but to receive your certificate of course completion you will need to take and pass the quiz.

Angela: The quiz is online and can be accessed below this video on the FPA's website. The quiz consists of multiple choice questions and will take approximately 10 minutes to complete.

Make sure you enter your name and email address to receive your certificate of course completion.

**[Section Title: Closing and thanks for attendance]**

>> Dydee: You've now completed the FPA's course on how to use the Threatened Species Adviser, congratulations! After watching this video and completing the quiz you should be able to confidently use the threatened species adviser, including how to identify species, range and habitat, how to obtain recommendations for both flora and fauna and how to applying those recommendations in an FPP. It's important to remember that in Tasmania we have more than 700 threatened species, most of which can be found in forests. We don't expect anyone to be an expert on all of them, which is why we provide these planning tools and supporting information, and are available to help. If you have any questions or need help to use any of these tools, just get in touch.

Thanks for attending our online course, we look forward to seeing you at the next one.

**[Section Title: Call for feedback on course and tools]**

[Text on Screen: At the FPA we welcome feedback on our courses and on our planning tools. If you have any feedback on this online video course, the threatened species adviser or any of the supporting tools we discussed in this video please reach out to us at [info@fpa.tas.gov.au](mailto:info@fpa.tas.gov.au) or on (03) 6165 4080. We value your opinions and all feedback goes into the continual improvement of our planning tools and contributes to planning future training courses.]