

1. Purpose

This guidance note is intended to provide direction to proponents and stakeholders where there is a requirement to undertake eagle nest searches and nest activity checks for either of Tasmania's threatened eagle species, the wedge-tailed eagle (*Aquila audax fleayi*) and/or the white-bellied sea-eagle (*Haliaeetus leucogaster*) as part of an environmental impact assessment.

This guidance is based on the Forest Practice Authority 2023, *Eagle nest searching, activity checking and nest management*, Fauna Technical Note No. 1, Forest Practices Authority (FPA), Hobart, which was prepared for use by the Tasmanian forestry industry.

At no time should this guidance take precedence over advice provided by the Department of Natural Resources and Environment Tasmania (NRE Tas). Contact:

Threatened Species and Private Land Conservation Section
Threatened Species and Conservation Programs Branch
Phone: 03 6165 4395
Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

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Policy, Projects and Regulatory Services Branch
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2. Eagle breeding season and management constraint period

Tasmanian eagles are sensitive to disturbance, particularly during the breeding season and consequently any eagle nest searching or eagle nest activity checking is required to limit disturbance around nest sites. The period over which eagles are most sensitive to disturbance is referred to as the *management constraint period*. The management constraint period is intended to include the majority of birds during the most sensitive stages of their breeding period.

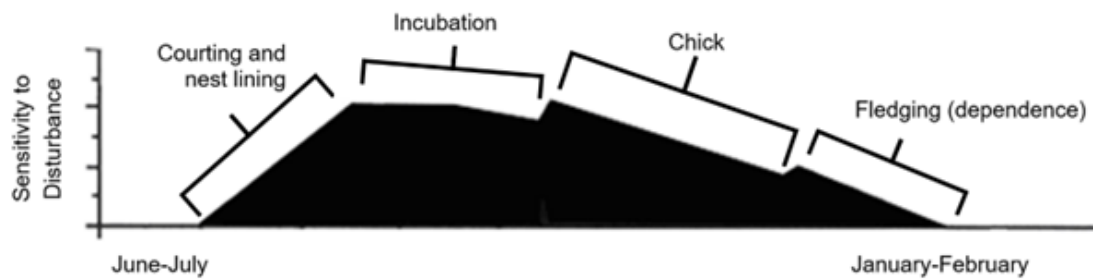
The start, finish and duration of the management constraint period can vary between years¹. It is recommended that the management constraint period is applied from July to January (inclusive), noting that breeding season can start as early as the beginning of June and extend into March².

The sensitivity of breeding pairs to disturbance varies during the breeding season. Sensitivity reaches its peak at the beginning of each phase of the breeding season (i.e. courting/nest refurbishment and lining, egg laying/ incubation, hatching and fledging)³. The diagram below highlights the fluctuation in eagles' sensitivity to disturbance throughout breeding.

¹ Forest Practices Authority 2023, 'Eagle nest searching, activity checking and nest management', Fauna Technical Note No. 1, Forest Practices Authority, Hobart.

² Koch, AJ, Wiersma, J & Munks, S 2013, Wedge-tailed Eagle Nest Monitoring Project 2007–12: Nest site use, timing of breeding, and a review of the nesting habitat model, report to Roaring 40s, Threatened Species and Marine Section (DPIPWE), Forest Practices Authority Scientific Report 16, Hobart.

³ FPA 2023



3. Searches for eagle nests

Searches for eagle nests must only be undertaken outside the management constraint period.

Nest searches should be undertaken by personnel with a lot of practice and a good understanding of where eagle nests are located. Nest searches must be undertaken by at least one person who has attended and passed an FPA/NRE Tas approved eagle management course.

3.1 Survey method

The method selected will depend on the forest type, the search area, the experience of searchers and resources available. There are two main methods for searching for potential nest sites:

1. Ground searching; and
2. Aerial surveys (rotor-wing).

Ground surveys

Searching on foot is particularly suited to drier, more open forests where visibility between trees and into canopies is good. Surveys on foot become less appropriate in thick, wet forests where visibility is poor. Ground searching is recommended for small areas containing less potential habitat but is less efficient for large areas containing a lot of potential habitat (e.g. large hill slopes in inaccessible river valleys).

If other environmental survey work is required to be undertaken at the same time (e.g. vegetation surveys), then ground searches should be carefully planned to ensure the survey design maximises nest detectability and minimises disturbance to potential nests.

Ground searches are best conducted by two or more people who walk 50–100 m apart (depending on visibility), providing an overlap in the trees they are assessing for potential nest sites. Potentially suitable areas should be considered and planned prior to conducting the search. Searchers should turn and look around at regular intervals – even large nests can be hidden from view from certain angles. In cases where the searchers are unsure of which species built a nest, a good quality photograph can be referred to NRE Tas for potential identification.

Aerial surveys

Helicopters are preferred for nest searches as they can fly low and slow enough for observers to find nests. Aerial searches are difficult and require specialised skills and therefore aerial search work must include at least one highly experienced searcher. It is important to have a very good idea of the areas that need searching before commencing a search activity.

Maps of the search areas should be pre-prepared. It is recommended that the most experienced person acts as the navigator to help ensure suitable areas are adequately covered.

The usual search method is to fly parallel transects following the contours. However, topography, weather conditions and safety considerations will ultimately determine the flight path. Narrow gullies are best investigated by flying up from the lowest point. Flying downhill limits the view of the forest canopy, particularly forest directly in front of the helicopter, but may be unavoidable in which case

additional transects should be flown. The contour transect method is most effective in larger areas over even slopes, but the width of transects and flight speed need to be adjusted for the density of the forest crown.

An external bluetooth GPS connected to a tablet up-loaded with search area polygons in combination with real-time recording of the helicopter flight path can provide valuable feedback on the adequacy of the search. Where practical, each known nest within the search areas, including newly located nests should be photographed through an open window (without hovering over nests, due to the damage rotowash may have on the nest), to obtain the best quality photographic record of the nest site

If a nest is located, an accurate GPS location is needed. If an accurate GPS location cannot be obtained from the air, a ground survey may be required to verify the nest location. Ideally, and if necessary, this should be done as soon as practicable after the aerial search.

If an eagle or eagles are observed near the search area they should be monitored closely. If the eagle shows interest or aggressive behaviours the search of that area should be abandoned immediately for safety reasons. If eagle/s remain in the vicinity for more than a few minutes, the search should be abandoned even if no aggressive behaviours are observed.

3.2 Nests “not found” and nests declared “absent”

Nests can be lost through natural attrition when nest trees or stabilising branches fall, when fires destroy nests, or through degradation of abandoned nests. When a searcher is confident of the locality information but a known nest is unable to be located during a nest search, there is a process for report the nest as ‘not found’ and, subsequently, to request that the nest be declared by NRE Tas to be ‘absent’. ‘Absent’, in the context of an eagle nest, is defined as a nest that was once present in a location but has been formally declared as ‘absent’ and is therefore no longer required to be managed.

To report a nest as “not found” the following process must be followed.

Undertake a nest search outside of the management constraint period and provide the following information supplied to NRE Tas via naturalvaluesatlas@nre.tas.gov.au:

- Raptor Nest Absent Forms
- Photos of the site including adjacent trees (if possible)
- Flight paths for the aerial search and/or GPS track logs for the ground search
- Personnel involved in the search, their training and experience
- Dates and times of searches
- A detailed description of the nest and reasons why it is considered not found (e.g., nest destroyed, nest on ground, nest tree fallen).

NRE Tas will generally only declare a nest as ‘absent’ after it has been reported ‘not found’ by three independent nest searches (at least one aerial and one ground search is preferred). There are exceptions to this however, where there may be an obvious reason for declaring the nest absent after only one or two searches (e.g. obvious wildfire, nest is on the ground, or nest tree has fallen and photographic evidence is supplied to confirm this).

Once a nest has been formally declared as “absent”, the nest record will remain on the Natural Values Atlas (NVA) but noted as absent, and management for that nest is no longer required.

4. Nest activity checks

The ‘activity’ of a nest refers to whether a breeding attempt is underway (e.g. presence of an incubating bird or a chick). Activity checks are conducted during the management constraint period.

All nest activity assessments should be considered likely to disturb the breeding pair, potentially leading to breeding failure and therefore should only be conducted under exceptional circumstances after consultation and approval from NRE Tas.

4.1 When is a nest considered active?

Due to the potential inter-annual variation in the timing of breeding events it is recommended that all known nest sites are considered 'active' during the breeding season unless otherwise confirmed by NRE Tas. If a nest is adequately assessed, at an appropriate time and by a trained assessor, then the nest is deemed active when there is a visible egg, chick or adult in incubating posture on the nest, and inactive if none of these are present.

4.2 When can nest activity be checked?

Activity checks should occur between mid-October and the end of December. Prior to mid-October, the risk of an inconclusive check is high. Very late activity checks (January onwards) should not be undertaken because of the risk of disturbing late stage nestlings (two-thirds fledging age) resulting in a premature fledging event. Such disturbance events have been known to cause serious injury or death of late stage nestlings.

4.3 Methods

There are two main methods for checking the activity of a known nest:

1. Ground based activity check; or
2. Aerial activity check (rotor-wing or fixed-wing aircraft).

Nests can be checked from the ground with the use of a telescope or good quality binoculars from a suitable vantage point. However, aerial surveys are, in most circumstances, more cost effective, accurate and produce fewer disturbances compared to ground checking methods. Ideally, add any nests requiring checking to the annual aerial nest activity checks undertaken by the FPA.

Ground based activity checks

Ground based nest activity checks are discouraged and should only be undertaken under exceptional circumstances following consultation with NRE Tas. In situations where a ground based activity check is the only or preferred option, refer to the following procedures.

1. If a ground based activity check is required to confirm the activity of a nest(s) contact the FPA and NRE Tas to ensure that nest checking is co-ordinated to prevent duplication of nest inspections. NRE Tas and the FPA may also have nest information that would mean some nests would not require checking.
2. Check nest locality and vantage point information. Ensure that you have correct nest co-ordinates. Correct and current nest location co-ordinates can be downloaded from the Natural Values Atlas <https://www.naturalvaluesatlas.tas.gov.au/>. Nest localities which are unverified or of a low site recording accuracy should not be assessed for activity during the management constraint period. Vantage points must be established outside of the management constraint period. **Under no circumstances should a ground based activity check be undertaken without a pre-established vantage point.**
3. Nests that cannot be clearly seen into should not be ground checked and aerial methods should be considered to reduce the chance of incorrectly assessing the status of nests.
4. Use the approach outlined in Table I to minimise the disturbance in undertaking ground based checks.
5. For each nest checked, a Raptor Nest Activity Check Form must be completed and submitted to NRE Tas via naturalvaluesatlas@nre.tas.gov.au. This form can be obtained from the FPA website - [Evaluation sheets and supporting files | Forest Practices Authority \(fpa.tas.gov.au\)](#).

Table 1 – Ground based activity checks approach

Disturbance factor	Mitigation
Personnel	A maximum of two accredited people are required to undertake an activity check. Wearing hi-vis equipment during the check should be avoided as this may result in raptors flushing from the nest leaving eggs, or chicks exposed. All effort must be made to ensure that observers are not sighted or heard by the resident eagles.
Weather	Activity checks must not be conducted on days when the temperatures are extreme (<10°C or >30°C) or raining.
Timing	No more than 20 minutes is to be spent between 100 m to 200 m of a nest to assess if the nest is active and record observations.
Noise	Noise must be kept to an absolute minimum, especially loud talking.
Distance	Only approach the nest as closely as you need to make the observations, never approach closer than 100 m of the nest site.
Direction	Plan to conduct the inspection upslope of the nest to provide the best possibility of observing the nest surface and any contents.
Eagle in area	If a bird is observed on the nest or in the immediate area, including circling overhead, leave the nest vicinity immediately (i.e. move at least 500 m away from the nest). This includes any birds observed from the time you exit your vehicle and during your approach to the nest observation point.

Aerial activity checks

Aerial activity checks are an economical way to check multiple nests, but can be unreliable and expensive if not undertaken by trained and experienced personnel. Helicopters (rotor-wing) are the preferred aircraft for activity checks, but fixed-wing aircrafts can also be used for this work. You must contact the NRE Tas if you wish to undertake aerial activity checks. The FPA may also have additional information related to particular nests that may mean some nests would not require checking.

Companies/individuals that would like to have nest(s) included in the FPA’s annual aerial activity check program, contact the FPA by mid-September at the latest.

4.4 Who can undertake a nest activity check?

Ground based activity checks must be carried out by at least one assessor who has attended and passed an FPA/NRE Tas approved eagle management course⁴. Individuals are encouraged to maintain the currency of their skills either via ongoing involvement in eagle management and refreshing their eagle training every five years.

Aerial activity checks are complex and require highly technical skills and therefore can only be carried out by those who can demonstrate competence in undertaking the work and have the capacity to collect robust data for use in determining management, with minimal disturbance on the breeding eagles. Aerial activity checks during the eagle management constraint period are not covered by FPA/NRE approved eagle management course. NRE Tas must be consulted prior to undertaking any aerial nest activity checks.

⁴ This does not include those that have been trained by someone who has attended the approved eagle management course.

5. Nest productivity assessments

Nest productivity assessments are undertaken to determine if the breeding attempt at a particular nest was successful (that is, a fledgling was produced). Nest productivity assessments should be considered potentially disturbing and are strongly discouraged. Nest productivity assessment should only be undertaken in circumstances where there is a justifiable reason and are not to be undertaken without consultation with NRE Tasmania.

6. Nest search and activity check results

The results from eagle nest searches and activity checks must be provided to NRE Tas via naturalvaluesatlas@nre.tas.gov.au for inclusion in the Natural Values Atlas (NVA) as soon as possible, or within 30 days of undertaking the survey.

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