

SPECIES MANAGEMENT PROFILE

Aquila audax subsp. fleayi Tasmanian Wedge-tailed Eagle

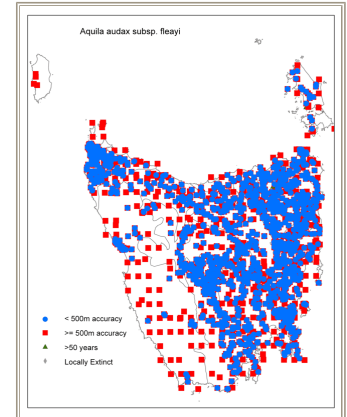
Group: Chordata (vertebrates), Aves (birds), Falconiformes (raptors, birds of prey), Accipitridae (raptor, hawk, eagle, buzzard, harrier, kite,)

Status: *Threatened Species Protection Act 1995:* **endangered**
Environment Protection and Biodiversity Conservation Act 1999: **Endangered**

Endemic Status: Found only in Tasmania



The Wedge-tailed Eagle subspecies *Aquila audax fleayi* occurs only in Tasmania, and is distinguished by its size (being Australia's largest bird of prey) and wedge-shaped tail. It kills and scavenges on animals including reptiles, birds and mammals, across a wide range of habitats, from the coast to highland areas. It defends a large territory, nesting in patches of mature forests with sheltered aspects throughout Tasmania (including large offshore islands). The total adult population has been estimated as less than 1000 birds. Principal threats include loss of nesting habitat, nest disturbance, collisions (with artificial structures, vehicles and aircraft), electrocution and persecution. While individual responses vary, disturbance occurring even many hundreds of metres away can cause breeding birds to temporarily leave eggs or chicks at risk, or even to desert their nest site for years. Disturbances involving visible people or helicopters can be particularly serious. Population numbers may increase if nest protection is more effective and unnatural mortality rates reduced.



Key Points

- **Important:** Is this species in your area? Do you need a permit? Ensure you've covered all the issues by checking the Planning Ahead page.
- **Important:** Different threatened species may have different requirements. For any activity you are considering, read the Activity Advice pages for background information and important advice about managing around the needs of multiple threatened species.

Habitat

- 'Habitat' refers to both known habitat for the species (i.e. in or near habitat where the species has been recorded) and potential habitat (i.e. areas of habitat with appropriate characteristics for the species and within the species' potential range which have not yet been surveyed).
- If in doubt about whether a site represents potential habitat for this species, contact the Threatened Species Section for further advice.
- The known range of Tasmania's Wedge-tailed Eagle includes the whole of mainland Tasmania from the coast to the Central Highlands, and many of the larger offshore islands.
- Nesting habitat includes the following elements: patches of mature (including old-growth) forest, or forest with mature/old-growth elements, normally greater than 10 ha in area; nest trees usually tall (25-75 m), large and robust mature eucalypts, generally taller than the canopy; nests are often constructed in the tallest and largest tree at a site, and usually located within the canopy even when the nest tree is taller; nests typically occur on the lee (sheltered) aspect of the site (or where hills shelter an otherwise exposed site), with the nest situated below the ridge level for protection from prevailing winds. Less typical habitat may sometimes be used (e.g. where the habitat has been much modified) where food is readily available.

What to avoid

- Disturbance (visible, or extreme audible) to a nesting eagle - this can result in the death of eggs or chicks, through exposure to cold, heat or predation while adults are absent - including:
 - people or loud machinery too near the nest during the breeding season ('too near' can be many hundreds of metres if in direct line of sight of the nest);
 - residential development near nesting habitat; and
 - investigating nests during the breeding season.
- Removal of nest trees or surrounding vegetation (the same nest may be used intermittently over decades)
- Risks of collisions with tall structures where the structure is difficult for an eagle to perceive in flight (e.g. power lines, horizontal axis wind turbines, guy wires).

Breeding season and levels of disturbance

- The majority of Wedge-tailed Eagle breeding activity typically occurs between August and January, but this varies between eagle pairs and from year to year. The breeding season includes the highly sensitive courting period, when birds are at or near the nest assessing levels of disturbance and nest suitability just prior to laying; this courting period most often occurs in July, but may begin with nest lining in June. In some years chicks will not fledge until as late as March, with disturbance prior to this event potentially causing young birds to attempt to fly before they are fully fledged.
- The Threatened Species Section may be able to advise on the timing of the current season.
- If a nesting eagle perceives a disturbance as a threat, even from hundreds of metres away, it may leave its eggs or chicks at

risk of cold, heat and predation. It may desert its nest site for years and long after the disturbance has ceased.

- A disturbance is more likely to disrupt breeding if: visible; louder; more intense; closer (either vertically or horizontally); over a longer period; more frequent; across a larger area; earlier in the breeding season; above the nest; people are visible; people are looking towards the nest; during the day; helicopters are involved; during extreme weather.
- Wedge-tailed eagles vary in their tolerance levels, and some may eventually nest in areas near certain levels of regular disturbance after some months or years spent assessing an area. However, a small additional disturbance may then be 'the straw that breaks the camel's back', i.e. enough to disrupt breeding, sometimes for years.
- Eagles are more tolerant of ongoing disturbance that began in an area before they started nesting, than they are of disturbance that is introduced once they are nesting.

Surveying

Key	Survey reliability more info
M	Peak survey period
M	Potential survey period
M	Non-survey period

To ensure you follow the law - check whether your survey requires a permit. Always report any new records to the Natural Values Atlas, or send the information direct to the Threatened Species Section. Refer to the Activity Advice: Surveying page for background information.

<i>Aquila audax fleayi</i>	Spring						Summer						Autumn						Winter					
Wedge-tailed Eagle nests	S	S	O	O	N	N	D	D	J	J	F	F	M	M	A	A	M	M	J	J	J	J	A	A

- The Natural Values Atlas holds location records for all reported Wedge-tailed Eagle nests.
- Survey for Wedge-tailed Eagle nest sites requires targeted searching of potential nesting habitat, outside the breeding season, which may vary in timing. See Key Points: Breeding Season and Levels of Disturbance, above, for more information.
- An eagle nest is constructed of sticks (mostly about the diameter of a human finger) and lined with bark. The nest normally measures 1 - 3 m across and 0.5 - 3 m deep, usually in a flat, robust fork close to the tree trunk, within the forest canopy and away from the ground slope. The nest tree is typically the tallest, largest tree in the area, with few branches near the ground
- Even if a nest is in poor condition or can no longer be found, its use in the past indicates that the site contains the essential suitable elements and may be returned to in future years.
- Results from previous surveys may not remain valid long-term. A new nest site may be established at the start of a breeding season, so a survey needs to be timed carefully in relation to a scheduled activity.
- To accurately assess whether a nest is in line of sight of an activity - seek expert advice. For long-term activities, do not depend on objects such as trees (which may fall, burn or be cut down) to block line of sight.
- Seek expert advice on whether a nest is being used during any one breeding season. An eagle nest may not be used for consecutive breeding seasons, and may be returned to even after many breeding seasons without use. A survey to check whether a nest is being used can easily disrupt breeding. Furthermore, eggs, chicks and other signs of nest activity can be difficult to detect by inexperienced surveyors.
- Important! Nest searches and surveys can easily disturb nesting birds, resulting in the death of eggs or chicks through cold or predation while adults are absent. To avoid this, nest searches and surveys must be carefully planned, and should only be carried out at the right time of year, by personnel with appropriate training.
- Seek further advice from the Threatened Species Section.

Helping the species

- To recognise the Wedge-tailed Eagle - learn to identify it in flight, and to distinguish adult birds (dark sooty-brown plumage) from immature birds (lighter tawny brown with a blond nape to the neck). Females are noticeably larger than males.
- To improve the chances of detecting, and thereby avoiding disturbance to, nesting Wedge-tailed Eagles in an area - learn to identify the typical signs of a nesting pair: aerial courtship displays (beginning in June), calls, and frequent sightings of pairs of birds in a particular location.
- To confirm whether Wedge-tailed Eagles are nesting in an area, without causing disturbance - organise a formal survey at the appropriate time of year by someone with appropriate training.
- To avoid disturbing nesting birds, which can lead to death of eggs or chicks - do not approach a potential nest site during the breeding season.
- Important! Always report any observations of Wedge-tailed Eagle nests to the DPI/PWE Natural Values Atlas, or else provide the data direct to the Threatened Species Section. Records stored on the NVA are a permanent record and are accessible to other people interested in this species.
- Consider the needs of the whole habitat. Preserving a threatened species' habitat is the best way to manage both the species and the environment in which it lives.
- For advice if you find an injured eagle - contact DPI/PWE Orphaned and Injured Wildlife on 03 6165 4305 or the Wildlife Incidents Hotline 1300 827 727. Specialist carers and rehabilitation facilities are located around Tasmania. Extreme care must be taken to ensure your own safety from an injured eagle. Do not touch the talons as they can inflict serious injury. Injured birds should be kept quiet and safe. Cover the bird with a towel, blanket, etc.
- To reduce risk of repeated eagle deaths - report deaths of eagles (or of any other native birds, including waterfowl) found beneath power lines or poles, to Aurora Energy 1300 13 2007. Where other structures appear to be responsible, report this to the Threatened Species Section. Provide the date, time and location of the discovery (including the identification number of any nearby powerpole), with your contact details and photographs where possible. Special adaptors may be installed to prevent future incidents of electrocution and collision.
- Some eagles are still intentionally shot each year. To reduce future eagle deaths through illegal shooting and poisoning - if you have any information on persecutions, please contact the Threatened Species Section. Information can be kept

confidential. Intentionally injuring or killing eagles can incur large fines.

- For long-term protection of eagles on private land - consider protection of nesting and other habitat through a vegetation management agreement or conservation covenant. A number of reserves and wildlife priority areas are in place for this species, which may be nearby or on your property boundary. These could be extended with your help. Linking properties to form large corridors of native bush and establishing Bushcare or Land for Wildlife networks can help reduce habitat fragmentation. See the DPIPW Private Land Conservation Program for more details.
- See the Wedge-tailed Eagle Recovery Plan for a full list of conservation management actions for this species.

Cutting or clearing trees or vegetation

- To reduce the potential for disrupting breeding - avoid noise or visual disturbance (e.g. removal of vegetation) within potential view or earshot of an eagle nest during the breeding season. See Key Points: Breeding Season and Levels of Disturbance, above, for more information. Survey potential nesting habitat for nests before such activities, at the appropriate time of year.
- To avoid loss of the elements important for a nest site, e.g. windbreaks, buffers from disturbance and potential future nest trees - maintain a large patch of relatively undisturbed forest around a nest, or habitat potentially containing a nest. A forest buffer of at least several hundred metres is especially important for shelter from prevailing winds, and this buffer should be wider on the uphill side. The larger the buffer, the greater the likely longevity of the nest and the more chicks are likely to be fledged there.
- Even if a nest is in poor condition or can no longer be found, its use in the past indicates that the site contains the essential elements for nesting and may be returned to in future years.
- To avoid additional loss of nesting habitat - do not cut or clear vegetation in or around a nest site even if the nest cannot be found.

Burning

- To avoid disruption to breeding - do not burn near a nest during the breeding season. See Key Points: Breeding Season and Levels of Disturbance, above, for more information. Survey potential nesting habitat for nests before such activities, at the appropriate time of year.

Agriculture

- To reduce the potential for disrupting breeding - do not create noise or visual disturbance (e.g. shooting, approaching on foot) within potential view or earshot of an eagle nest during the breeding season. See Key Points: Breeding Season and Levels of Disturbance, above, for more information. Survey potential nesting habitat for nests before such activities, at the appropriate time of year.
- While all disturbance near nests should be avoided during the breeding season to minimise the potential for disrupting breeding, note that approaches within vehicles (especially if the vehicle does not stop) are less likely to disrupt breeding than approaches at similar distances where the vehicle stops and people are visible.
- A high proportion of Tasmania's Wedge-Tailed Eagles' nests are on private land.
- If managing stock losses where eagles are involved, see Eagles on the Farm and/or contact the Threatened Species Section.
- To reduce future eagle deaths through illegal shooting and poisoning - if you have any information on persecutions please contact the Threatened Species Section. Information can be kept confidential. Intentionally injuring or killing eagles can incur large fines.

Construction

- To reduce the potential for disrupting breeding - do not create noise or visual disturbance (e.g. construction activities) within potential view or earshot of an eagle nest during the breeding season (see above - Key Points: Breeding Season and Levels of Disturbance). Survey potential nesting habitat for nests before such activities, at the appropriate time of year.
- To avoid disrupting breeding - do not construct developments which could result in future disturbance near a nest or potential nesting habitat during the breeding season.
- Wind turbines spinning on a horizontal axis, being difficult to see and moving deceptively fast, can cause death by collision to Wedge-tailed Eagles. Vertical axis turbines, being easier to see, may present less of a risk.
- To reduce risk of death by collision - do not place wind turbines and other difficult-to-see structures in areas where eagles commonly fly. Consider using vertical axis turbines.
- To reduce risk of death by collision - place markers or deterrents on difficult-to-see structures, especially where they may cross flight paths and where deaths have previously been reported. Aurora may install special devices to power lines to make them more visible in areas where deaths have previously been reported.
- To reduce risk of death by roadkill (when eagles are feeding on other roadkilled prey) - design roads to reduce roadkill risks (e.g. optimise chances for motorists to detect animals on the road in time to avoid them), and regularly remove other roadkill from roadsides.
- For further guidance on reducing risk of death by electrocution or collision - contact the Threatened Species Section or Aurora Energy on 1300 13 2007 and request to speak to an environmental advisor.
- To reduce risk of repeated deaths - report dead eagles or any dead native birds including waterfowl beneath power lines or poles to Aurora Energy on 1300 13 2007, or where other structures appear to be responsible, to the Threatened Species Section. Provide the date, time and location of the discovery, with your contact details and photographs where possible. Special adaptors may be installed to prevent future incidents of electrocution and collision.

Subdivision

- To reduce the potential for disrupting breeding - do not create noise or visual disturbance (e.g. construction activities) within potential view or earshot of an eagle nest, during the breeding season. See Key Points: Breeding Season and Levels of Disturbance, above, for more information. Survey potential nesting habitat for nests before such activities, at the appropriate time of year.
- Remember - the consequences of subdivisions, including the activities of residents and their pets, can create potential

disturbances to eagle breeding well beyond the footprint of the subdivided property.

- To avoid disrupting breeding - do not create subdivisions which could result in future disturbance near a nest or potential nesting habitat during the breeding season.
- To minimise risks to breeding associated with a subdivision - develop a nest management plan for potentially disturbing activities (e.g. walking, dirt-biking, wood-cutting) in the vicinity of nesting eagles.

Earthworks

- To reduce the potential for disruption to breeding - do not create noise or visual disturbance (e.g. earthworks, blasting) within potential view or earshot of an eagle nest. See Key Points: Breeding Season and Levels of Disturbance, above, for more information. Survey potential nesting habitat for nests before such activities, at the appropriate time of year.

Aircraft

- Breeding Wedge-tailed Eagles are particularly sensitive to aircraft approaching the nest, even if the aircraft remains many hundreds of metres away. Helicopters are perceived as a greater threat than fixed wing aircraft, and may be attacked by eagles, risking both eagle and aircraft. See Key Points: Breeding Season and Levels of Disturbance, above, for more information.
- To avoid disruptions to breeding and risks to aircraft - pilots can download eagle nest records from the Natural Values Atlas and avoid flying near these areas, especially during the breeding season.
- To effectively avoid disturbing eagle nests - operate aircraft off-shore and over other unsuitable nesting habitat as much as possible, and do not circle round or hover near eagles or potential nests. Note that some National Parks provide specific guidelines (e.g. Freycinet National Park Pilot Guidelines).
- To avoid collisions if flying over nesting habitat during the breeding season is unavoidable - fly as high, swiftly and directly over the area as possible, learn to recognise aggressive behaviour and be on the lookout for warning signs while flying.
- To avoid disrupting newly established nests - regularly update your eagle nest records from the Natural Values Atlas, and report any suspected nests observed when flying to the Threatened Species Section.
- For further guidance - contact the Threatened Species Section.

Use of chemicals

- Agricultural chemicals such as rodenticides, insecticides and herbicides can often kill eagles and other birds of prey, as it is difficult to control which animals take baits or feed on poisoned carcasses.
- To prevent direct poisoning of birds - do not use poisons to which eagles are sensitive, such as Pindone, in nesting and foraging habitat.
- To prevent secondary poisoning of birds - avoid using single-dose rat poisons in nesting and foraging habitat.

Recreation

- To reduce the potential for disrupting breeding - do not create noise or visual disturbance within potential view or earshot of an eagle nest. Disturbances where people are visible are especially disruptive. See Key Points: Breeding Season and Levels of Disturbance, above, for more information. Survey potential nesting habitat for nests before such activities, at the appropriate time of year.
 - To avoid disrupting breeding - if you observe a potential nest site, report the observation to the Threatened Species Section and, where possible, to the property owner or land manager. If the observation is during the breeding season, leave the area swiftly and quietly.
 - In Tasmania, photography of nesting eagles can easily disturb the breeding birds, and cause nest desertion.
 - To avoid disruption to nesting birds by bushwalkers and cyclists - plan tracks and campsites far from eagle nests. Survey potential nesting habitat for nests before such activities, at the appropriate time of year. Include features which discourage visitors from travelling off-road towards nests.
 - Racing in natural areas (e.g. cross-country running, cycling) has a high potential to disturb any eagles breeding near the route, due to the number and noise of race participants and observers (especially if including helicopters).
 - To avoid disruption to breeding from a race occurring during the breeding season - design the race route far from eagle nests and habitat potentially containing an eagle nest.

Further information

Check also for listing statement or notesheet pdf above (below the species image).

Recovery Plan

Eagle nest occupancy checks 2013

How to obtain current eagle nest location data

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Contact details: Threatened Species Section, Department of Primary Industries, Parks, Water and Environment, GPO Box 44, Hobart, Tasmania, Australia, 7001. Phone (1300 368 550).

Permit: A permit is required under the Tasmanian *Threatened Species Protection Act 1995* to 'take' (which includes kill, injure, catch, damage, destroy and collect), keep, trade in or process any specimen or products of a listed species. Additional permits may also be required under other Acts or regulations to take, disturb or interfere with any form of wildlife or its products, (e.g. dens, nests, bones). This may also depend on the tenure of the land and other agreements relating to its management.