

Attachment 4 - Relevant State Service Agency and landowner assessment criteria

The Department of Natural Resources and Environment Tasmania (NRE Tas) offers the following advice in accordance with sections 60ZJ(l)(a) & (b) of the *Land Use Planning and Approvals Act 1993* (LUPAA) as an owner of land on which the Major Project is to be situated and owner of adjoining land, section 60ZJ(1)(f) as the manager of Crown land, and section 60ZJ(l)(e) as a State Service Agency which may have an interest in a matter to which the Major Project relates.

These matters are not part of the Assessment Requirement Notice issued in accordance with NRE Tas's role as a Relevant Regulator.

The following assessment criteria are recommended for inclusion in the Major Project Impact Statement (MPIS) to enable NRE Tas to appropriately assess and provide specialist advice regarding impacts to natural values from the Major Project. It is also worth noting that there are restrictions in relation to vegetation removal (native forest harvesting) over the Future Potential Production Forest Crown land managed under the *Forestry (Rebuilding the Forest Industry) Act 2014*.

Assessment criteria under section 60ZJ

- (1) Threatened avian fauna and habitat** - provide an assessment of how the potential impacts of the Major Project on listed avian fauna and their habitats are avoided, mitigated or offset, and provide details of any proposed measure to minimise, mitigate or offset adverse impacts where unavoidable.
- (2) Eagles** - provide an assessment of how the potential impacts of the Major Project on the Tasmanian wedge-tailed eagle and white-bellied sea eagle and their nests are avoided, mitigated or offset, and provide details of any proposed measure to minimise, mitigate or offset adverse impacts where unavoidable.
- (3) Threatened terrestrial fauna and habitat** - provide an assessment of how the potential impacts of the Major Project on listed terrestrial fauna and their habitats are avoided, mitigated or offset, and provide details of any proposed measure to minimise, mitigate or offset adverse impacts where unavoidable. Provide a traffic impact assessment for the Major Project and any measures to mitigate roadkill impacts.
- (4) Threatened aquatic fauna** - provide an assessment of how the potential impacts of the Major Project on listed aquatic fauna are avoided, mitigated or offset, and provide details of any proposed measure to minimise,

mitigate or offset adverse impacts where unavoidable.

- (5) **Threatened Native Vegetation Communities (TNVC)** - provide an assessment of how the potential impacts of the Major Project on TNVC will be avoided, minimised and mitigated, and provide details of any proposed measures to mitigate or offset adverse impacts where unavoidable.
- (6) **Conservation Covenant** - provide an assessment of how the potential impacts of the Major Project outlined in the following corresponding section will be avoided, minimised and mitigated, and provide details of any proposed measures to mitigate or offset adverse impacts where unavoidable.
- (7) **Acid Sulfate Soils** - provide an Acid Sulfate Soils management plan.

Further context regarding these assessment criteria is provided below, including recommended information to be provided in the MPIS.

Information to be provided in the MPIS to address the recommended assessment criteria

(1) Threatened avian fauna and habitat

Bird Utilisation Surveys are recommended for the Project Area, including the wind farm and transmission lines. The preliminary Surveys, as outlined in the preliminary flora and fauna assessment and the preliminary bird and raptor survey, are considered to be draft documents. Further Surveys and finalisation of preliminary documents are recommended.

It is recommended that Bird Utilisation Surveys of migratory species such as swift parrots (*Lathamus discolor*) should be performed during their migratory periods, and not limited to a week of surveys in each season (as currently outlined in the preliminary bird and raptor surveys).

Masked Owl

Masked owls (*Tyto novaehollandiae* ssp. *castanops*) are identified in the Natural Values Report and Overview Flora and Fauna Assessment as potentially occurring within the Project Area, based on range boundaries and the presence of potential nesting and foraging habitat (*Eucalyptus* forest and woodland communities) within the site. A lack of species records within the Project Area cannot be assumed as absence. Masked owls inhabit a diverse range of forests and woodlands, including agricultural and forest mosaics which provide good foraging opportunities. Nesting occurs in large tree hollows of living or dead trees (diameter at breast height [DBH] of 100 cm is a good indicator of ability to support hollows of adequate size).

The presence of masked owls would not be adequately captured from the current ongoing Bird Utilisation Surveys (fixed point counts). It is possible that the species occurs within, or adjacent to, the proposed development impact footprint and

targeted surveys are recommended for the species within the Project Area. This is particularly pertinent in areas where the development is likely to encroach on masked owl habitat, i.e., areas where infrastructure such as cables and roads will cross forests and woodlands. Potential impacts on the species, such as collision with WTGs, should also be considered.

Passive acoustic monitoring is the primary recommended method for confirming masked owl presence or absence. For this, NRE Tas recommends two deployments of acoustic recorders: three weeks for each deployment. The two deployments need to be in different seasons, e.g., one in spring and one in summer. The recording schedule needs to be all night long to indicate presence/absence. The data analysis (i.e., detection of masked owl calls) needs to be done either manually by a trained rater or by reliable software. Detection range of recorder types and variables such as weather, topography and vegetation must be considered when interpreting and presenting passive acoustic monitoring data.

A survey for masked owl nesting habitat should also be carried out as part of the natural values surveys in areas of potential habitat. If any potential nest trees (single remnant paddock trees should also be considered) are recorded within, or close to, the Project Area, further investigations should be carried out to determine the likely presence of the species, potential impacts of the development on the species, and to inform avoidance and mitigation measures.

Swift Parrots

Swift parrots are identified in the Natural Values Report and Overview Flora and Fauna Assessment as potentially occurring within 500 m of the Project Area, with known records within five km.

Bird Utilisation Surveys may have missed birds during their pre- and post-breeding movement and migratory periods as it is expected their movements in northern Tasmania change every year depending on weather patterns and available foraging resources. A lack of species records within the Project Area cannot be assumed as absence. It is recommended the species be included in further Bird Utilisation Surveys to assess their use of the development impact footprint (movement, flight height) and adjacent areas for nesting, foraging, and transiting (e.g., as part of migration and/or between foraging and nesting sites) to assess impact and inform mitigation.

There is a likelihood of suitable habitat being affected by the development.

Eucalyptus ovata forest and woodland was detected within the proposed transmission line easement (Overview Flora and Fauna Assessment, p. 60, Table 4), and it is recommended that detailed on-ground assessments include suitable habitat for this species, i.e., mature trees that may be suitable for nesting, and foraging trees (particularly *Eucalyptus globulus*, *E. ovata* and/or *E. brookeriana*) and that may occur as individual trees or dominant and/or subdominant stands in mapped vegetation communities.

Note that within the Overview Flora and Fauna Assessment (p. 51, Table 2) there should be a correction to the sentence '*Breeds in old-growth eucalypts bearing hollows, usually Tasmanian blue gums*'. Swift parrot nesting can occur in hollow-bearing trees in a range of mature eucalypt species.

In the same table, the sentence '*May use the site for foraging, or as a corridor for birds migrating south to breeding grounds*' should be corrected to include swift parrots potentially using the area as a flyway for north and south movements.

Blue-winged Parrots

The blue-winged parrot is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBCA) and is currently being considered for listing under the *Threatened Species Protection Act 1995* (Tas) (TSPA) by the Tasmanian Scientific Advisory Committee. The species has previously been recorded within the Project Area and was also observed during the preliminary flora and fauna assessment. Further surveys are recommended for this species to determine the bird's use of the Project Area and how to mitigate impacts on the species.

Seabirds and Shorebirds

While seabirds and shorebirds (including threatened species) have been identified in the preliminary fauna surveys, they are predominantly marine-based observations, and the proposed works are terrestrial-based. Some shorebirds have been identified on the coastline adjacent to the Project Area, and impacts to these birds are likely to be low risk given that the Project Area is located approximately 100 m inland of the coast and contains no recorded breeding colonies. However, vegetation mapping in the project area is of low reliability and this may include mapping of Seabird Rookery Complex vegetation (a threatened vegetation community). Given that short-tailed shearwaters (*Puffinus tenuirostris*) were identified in the preliminary survey, NRE Tas recommends that vegetation across the entire Project Area is systematically field validated, including searches for seabird burrows/seabird habitat in areas closer to the coastline. Ideally, confirmation of seabird habitat and any breeding species should be undertaken during the breeding season.

Seabirds can be disorientated by light pollution that is projected out to sea. NRE Tas recommends the proponent considers lighting management to reduce seabird impacts at all stages of the development, particularly for any construction/infrastructure within 500 m of the coastline or within 500 m of any vegetation identified as Seabird Rookery Complex. Lighting design should incorporate the principles outlined in the [Department of the Environment and Energy National Light Pollution Guidelines for Wildlife](#) in order to reduce the impacts of artificial light during night-time hours, in particular Appendix A - Best Practice Lighting Design.

Please note that some listed migratory shorebirds have been listed in the proposal, while some are missing that were detected in the Natural Values Report, e.g.,

hooded plover (*Thinornis cucullatus*), ruddy turnstone (*Arenaria interpres*), eastern curlew (*Numenius madagascariensis*) and common greenshank (*Tringa nebularia*). It is recommended that the proposal is amended to be consistent with the Natural Values Report.

(2) Eagles

The threatened Tasmanian wedge-tailed eagle and white-bellied sea eagle have previously been recorded within the Project Area and were also observed during the preliminary flora and fauna assessment. Further surveys are recommended for threatened eagle species and their nests to determine their use of the Project Area and develop suitable mitigation measures.

Eagle Nest Searches

The preliminary flora and fauna assessment recorded two eagle nests located within the Project Area and two eagle nests located within one km of the Project Area. It is recommended that eagle nests located during the site surveys are recorded in the Natural Values Atlas and potential impacts from the proposed development are considered. Further investigations are recommended to determine whether the current known nests are active.

NRE Tas recommends an eagle nest search that incorporates all potentially suitable habitat within the Project Area and out to at least one km from the Project Area boundary. For this purpose, the boundary should incorporate all areas that will be disturbed as a result of the development (e.g., vegetation clearance, infrastructure locations, transmission/distribution line corridors, roadworks areas, etc).

Nest searches must be conducted outside the eagle management constraint period (July-January inclusive), in accordance with the [FPA Technical Note No. 1: Eagle nest searching, activity checking and nest management.](#)

Bird Utilisation

An analysis of eagle utilisation of the site is recommended for a period of two years prior to construction. This should be conducted using standard bird utilisation techniques (e.g., multiple experienced human observers carrying out multi-day surveys, from dawn to dusk, during all four seasons, for a period of two years) – noting that the effort (number of observers, number of survey points, duration of survey period, etc) should be commensurate with the scale of the Project Area (as an example for previous wind farms, utilisation surveys have required observations for a minimum of five days per season, even for small scale wind farms). Data collected during utilisation surveys should include at a minimum the approximate direction, altitude and time of flights, as well as the species observed.

To be useful, bird utilisation data should be presented in a manner that is representative of the 3-dimensional nature of movement patterns (e.g., contour maps) and overlaid with the proposed infrastructure locations for context. The siting

of WTGs, distribution/transmission lines and other infrastructure should take into account the results of the utilisation surveys (and GPS tagging of eagles by other parties where available) in order to avoid or mitigate potential impacts.

Carcass Management

NRE Tas recommends the proponent outline the details of how eagle food resources (e.g., carcasses) will be managed across the site, to address the collision risk (with WTGs, infrastructure, vehicles, etc). This may include monitoring along roadsides, around turbines, and beneath electrical infrastructure. The assessment should consider the potential implications of changes to land use pre-construction, during and post-construction, such as changes to recreational hunting activity.

Collision Monitoring

Collisions with WTGs and associated infrastructure (e.g., distribution/transmission lines) are considered one of the greatest sources of potential impacts to eagles from wind farms. The MPIS should outline how collisions are proposed to be avoided or mitigated and provide an offset strategy to address any residual impacts expected over the life of the BBWF. At this point in time, NRE Tas does not consider Collision Risk Models to be sufficient as a stand-alone tool to predict impacts as they are not considered to be reliable indicators of collision risk. If the proponent intends on developing a Collision Risk Model, it should be used in conjunction with other survey/assessment methods, such as Bird Utilisation Surveys.

NRE Tas recommends WTGs are sited to avoid impacts to eagles. NRE Tas also recommends the implementation of mitigation measures to reduce the impact of the WTGs on avifauna, such as an automated avifauna tracking, a WTG curtailment system, and the implementation of a black blade on each WTG for better visibility.

If technology-based mitigation or avoidance approaches are proposed (e.g., IdentiFlight, Robin Radar etc), then an assessment of their likely effectiveness at the impact site should be presented in the MPIS. It is recommended that this is informed by results from their use at existing wind farms, especially in the Tasmanian context. Please note that handling injured or killed individuals of a threatened species requires a permit under the TSPA.

In addition, the NRE Tas recommends that the installation of any new or upgraded transmission lines/infrastructure includes bird mitigation measures to minimise the risk of bird collisions and electrocution.

(3) Terrestrial Threatened terrestrial fauna and habitat

The Major Project Proposal highlights several terrestrial threatened fauna species listed under the TSPA and/or EPBCA that have potential habitat within the Project Area and may be impacted by the Project.

Tasmanian Devils and Quolls

To date, assessment of Tasmanian devil presence within the Project Area has been via a cursory field site assessment and desktop evaluation (Overview Flora and Fauna Assessment – Executive summary). The assessment was limited to incidental searches for mammal scat, tracks and signs (4.2.3 p. 12), with devils being recorded as present through recording of scats and tracks (5.5.1 p. 48). The Major Project Proposal mentions that Tasmanian devils (along with eastern quolls (*Dasyurus viverrinus*) and spotted-tailed quolls (*Dasyurus maculatus maculatus*) may use habitat features identified in the site assessment for denning and that appropriate surveys will need to be undertaken to map denning sites with the aim of micro siting impacts (of the WTGs) to avoid impacts to these den sites (5.5.6 p. 57). Currently the proposal is very high level with no detail of likely impacts to devils and quolls or required surveys or mitigation to reduce/avoid impacts.

Under 'Fauna (non-avian)' (Major Project Proposal, p. 37, Table 9) there is little information on the types of surveys the proponent plans to undertake other than “A *detailed investigation ... will be undertaken*”. At this stage there is no clarity regarding the amount of land clearing likely to occur, despite this action being the key threatening process for terrestrial non-avian fauna including devils and quolls. NRE Tas recommends a thorough investigation for possible den sites, particularly in the areas where suitable denning habitat is proposed for clearing. This initial den survey should be used to inform the BBWF design and WTG placement. Prior to construction and clearing of appropriate denning habitat, it is recommended that a final den survey should be conducted to ascertain the presence of any new or previously unrecorded den sites within the area/s to be cleared.

Traffic Impacts – Roadkill

Table 9 of the Major Project Proposal (p. 37) outlines a proposed Traffic Impact Assessment. NRE Tas recommends the MPIS includes an analysis of the likely increase in traffic during construction of the development, including a discussion of the time of day that this increase is likely to take place (daylight hours vs. night-time). If there is a likely increase in night-time traffic on Soldiers Settlement Road, a roadkill assessment prior to the start of operations should be undertaken to predict the impact on devils, particularly during the construction phase. If there is any anticipated increase in devil roadkill from the development, it is recommended that mitigation measures are developed and implemented for the Project.

Reptiles

The Overview Flora and Fauna Assessment identifies suitable habitat for two lizard species listed under the TSPA, the glossy grass skink (*Pseudemoia rawlinsoni*) and the tussock skink (*P. pagenstecheri*). The glossy grass skink inhabits rushy grasses/low dense vegetation along the margins of swamps and watercourses, and in areas where dry sclerophyll forest meets wet heathland subject to frequent flooding, and the tussock skink inhabits tussock grassland and grassy open woodland.

NRE Tas recommends targeted surveys to determine if either skink species is present within the Project Area, and if any suitable habitat for either species is likely to be impacted by the development. If suitable habitat for the glossy grass skink or tussock skink is identified within the development impact footprint, mitigation measures should be included in the MPIS. Surveys should be undertaken in the warmer months in accordance with recommended methodology for the species – the following documents may provide a suitable reference guide for skink surveys: [DCCEEW's Survey Guidelines for Australia's Threatened Reptiles](#), and the [Forest Protection Survey Program's Survey Guideline – Reptiles](#).

(4) Threatened aquatic fauna

Frogs

Two listed frog species have previously been identified within or close to the Project Area. The green and gold frog (*Litoria raniformis*) has previously been recorded within the Project Area and was also observed during the preliminary flora and fauna assessment. The striped marsh frog (*Limnodynastes peronii*) has been recorded close to the Project Area. Further surveys are recommended to determine if either of these species are present within the Project Area. If either the green and gold frog or the striped marsh frog are recorded within the development impact footprint, mitigation measures should be included in the MPIS.

(5) Threatened Native Vegetation Communities

Vegetation values within the Project Area that may be impacted by the proposed development cannot be assessed without comprehensive field surveys of vegetation type and structure, extent and condition. Existing mapping in TASVEG 4.0 and TASVEG Live for the Project Area is considered to be of low reliability and the following factors should be taken into consideration:

- The majority of the existing TASVEG 4.0 mapping over the Project Area has been derived from 1997-1999 imagery. Native vegetation mapping has not been updated since 2014, and plantation areas since 2017.
- In TASVEG, the Source Interpretability Rating Scale (SIRS) is used to rate imagery from poor interpretability (0) to high interpretability (10). This represents the ability of a user to discriminate between vegetation types during desktop mapping. For the Project Area, SIRS values are 3.2-5.5 or unknown. As a result, the mapping of vegetation communities for this area is considered low reliability. Further to this, only one polygon has been field validated across the Project Area.
- TASVEG Live contains updates to plantation mapping, and minimal updates to native vegetation outside the Project Area (within the Conservation Covenant). No additional field validation has been recorded and the SIRS

remains below 5.5 or unknown.

It is recommended that vegetation within the Project Area is systematically field validated, including threatened native vegetation communities, and that the development impact footprint (not provided as yet) endeavours to avoid areas of high value vegetation. Equal consideration should be given to areas likely to incur temporary impacts during construction (e.g., trenching for transmission lines, material laydown areas) and areas likely to incur permanent operational impacts (e.g., WTGs, substations, associated buildings, access roads, and any material sourcing on-site).

There is a lack of clarity regarding the extent and type of vegetation and threatened native vegetation communities referred to in the Major Project Proposal, and whether they have been identified via desktop analysis or via preliminary field surveys. NRE Tas recommends clarification over how vegetation communities were identified, which edition of the TASVEG classification has been adhered to, and whether desktop analysis refers to the generation of a NVA report. Without this clarification, vegetation values that may be impacted by the development cannot be appropriately assessed.

NRE Tas encourages the proponent to pursue early engagement with our Natural Assets Spatial Intelligence Section (NASIS), to ensure vegetation survey and mapping efforts are of appropriate quality and capture sufficient metadata for their integration into TASVEG Live. Survey data should be collected and mapped following the recommended TASVEG 4.0 data structure. Appropriate documents and protocols can be provided to consultants by NASIS before prior to the commencement of vegetation surveys and mapping.

(6) Conservation Covenant

The Project Area is located directly adjacent to the Curries River Conservation Covenant at 'Fozards' Beechford Road, Beechford. The Major Project Proposal identifies the Conservation Covenant and specifically notes that the covenanted Land has been excluded from the Project Area because of its environmental values.

The Curries River Conservation Covenant was established to protect the natural values and the Comprehensive, Adequate and Representative (CAR) values of the covenanted land. The CAR values of the covenant are identified below:

Vegetation:

- Old growth *Eucalyptus amygdalina* (black peppermint) coastal forest and woodland (DAC)
- *Eucalyptus amygdalina* (black peppermint) coastal forest and woodland (DAC)
- *Eucalyptus ovata* (black gum) forest and woodland (DOV)

- *Melaleuca ericifolia* (swamp paperbark) swamp forest (NME)
- Coastal heathland (SCH)
- Lowland sedgy heathland (SHL)
- Wet heathland (SHW)
- *Melaleuca squarrosa* (scented paperbark) scrub (SMR)

Flora:

- *Caladenia cordata* (tailed spider orchid)
- *Phyllangium divergens* (wiry miterwort)
- *Caladenia patersonii* (patersons spider-orchid)

Eagle Nests:

- Nest 3084: newly established eagle nest recorded as present in June 2022
- Nest 3085: newly established eagle nest recorded as present in June 2022

The WTG area footprint will extend into the one km line-of-site radius of both Nest 3084 and Nest 3085, located within the conservation covenant Land. This has potential to indirectly impact the CAR Values of the Curries River Conservation Covenant through disturbance to, or impacts on, eagle breeding success. NRE Tas recommends that the WTG footprint be revised to ensure that it does not occur within the eagle nest management zones for Nests 3084 and 3085.

The vegetation communities within the Curries River Conservation Covenant are susceptible to *Phytophthora cinnamomi* (Pc; root rot). NRE Tas recommends biosecurity hygiene procedures be required for vehicles, machinery and equipment to avoid the introduction or establishment of pathogens or weeds to the land adjacent to the conservation covenant.

(7) Acid Sulfate Soils

The Major Project Proposal (p. 39) indicates that specialist input is required to undertake an Acid Sulfate Soils (ASS) assessment during the MPIS stage. If specialist assessment of the soils within the Project Area discovers the presence of Acid Sulfate Soils (ASS), it is recommended that NRE Tas is contacted for further advice and guidance regarding management of ASS during the construction phase of the Project.

The Project Area is mapped as having a low likelihood of containing Potential Acid Sulfate Soils (PASS). However, if ASS is observed during specialist assessment, appropriate action should be taken in accordance with the [Tasmanian Acid Sulfate Soil Management Guidelines](#) (the ASS Guidelines). The ASS Guidelines indicate that a management plan is required for an activity if >100 m³ PASS materials is likely to be disturbed during the construction phase. NRE Tas recommends the

management plan clearly describe the relevant construction techniques and include a risk assessment based upon the ASS field assessment. It should also list and describe management, avoidance and monitoring strategies/activities associated with the works.