

Northwest Bay River Multi-use Trail – Stage 2

Threatened Raptor and Swift Parrot Survey Summary Report

Prepared for Kingborough Council,
Tasmania

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**Nature
Advisory**

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1. Introduction

The Kingborough Council engaged Nature Advisory to conduct an avifauna survey adjacent to the North-West Bay River between Miandetta Drive and Channel Highway, Margate, Tasmania (herein referred to as the study area). The survey, completed on 19 August 2024, aimed to assist the Kingborough Council in securing relevant approvals for a multi-use trail by assessing habitat suitability and utilisation of the site by threatened bird species (i.e. listed under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* [EPBC Act] and / or Tasmania's *Threatened Species Protection Act 1995* [TSP Act]).

This summary report documents the surveys completed with reference to published guidelines or research articles on the focal (sub)species where possible. These (sub)species include:

- Grey Goshawk - *Tachypiza novaehollandiae*. Endangered [TSP Act], Not listed [EPBC Act].
- Masked Owl (Tasmanian) - *Tyto novaehollandiae castanops*. Endangered [TSP Act], Vulnerable [EPBC Act].
- Swift Parrot - *Lathamus discolor*. Endangered [TSP Act], Critically Endangered [EPBC Act].
- Wedge-tailed Eagle (Tasmanian) - *Aquila audax fleayi*. Endangered [TSP Act], Endangered [EPBC Act].

2. Aims

The aims of the survey were to:

- Locate Grey Goshawk and Tasmanian Wedge-tailed Eagle (hereafter Wedge-tailed Eagle) nests and assess their activity status (i.e. active / inactive). This included identifying suitable habitat for either species within areas that will be impacted and within 150 m and 500 m of those areas for the Grey Goshawk and Wedge-tailed Eagle, respectively.
- Locate any suitable roosting and / or nesting habitat for the Masked Owl (Tasmanian) and Swift Parrot and record signs of occupancy or use. This includes searching in areas that will be impacted and within 150 m of those areas.
- Locate any suitable foraging habitat for the focal (sub)species listed above.
- Record any incidental observations, detections, dens and essential habitats of any listed threatened species.

3. Methods

3.1 Desktop mapping

A desktop mapping assessment was initially undertaken before fieldwork to delineate the study area and identify areas of suitable nesting/roosting and foraging habitat for the focal (sub)species. This determined where ground survey efforts would be concentrated for each individual (sub)species.

3.2 Ground surveys

3.2.1 Grey Goshawk and Wedge-tailed Eagle (Tasmanian)

The location of raptor nests, and suitable nesting habitat was recorded and assigned to a (sub) species based on the surveyor's expertise, the geographic location of the nest tree (e.g. aspect, slope inclination, distance to watercourse), nest tree dimensions (diameter at breast height [DBH] and tree height), nest features (diameter, placement in tree and stick [building material] size) and surrounding habitat and vegetation (Young *et al.* 2024; Young & Kirkpatrick 2024).

The condition of nests was assessed and scored on a scale from 1 – 5 (where '1' indicates a poor condition nest, and '5' indicates a well-maintained nest) to determine past use and likelihood of use in the future. Further evidence of site utilisation was corroborated by recording any prey remains, regurgitated pellets, feathers and 'whitewash' (uric acid) at the base of the nest tree.

The location of any suitable foraging habitat was also recorded and assigned to a (sub)species level based on the surveyor's expertise, geographic location, and surrounding habitat and vegetation types (Young unpublished data).

3.2.2. Masked Owl (Tasmanian)

Ground surveys targeting suitable hollow-bearing trees for the Masked Owl (Tasmanian) were undertaken throughout the study area and concentrated in areas with high densities of dead and large, ageing trees. Trees with a DBH greater than 80 cm in diameter and a hollow entrance greater than 15 cm in diameter were considered suitable nests or diurnal roosting hollows for the subspecies (Mooney 1997, Forest Practices Authority 2016, Young *et al.* 2020, Young *et al.* 2021).

Evidence of site utilisation was determined by the presence of prey remains, regurgitated pellets, feathers and 'whitewash' at the base of suitable hollow-bearing trees. Additionally, the location of any suitable foraging habitat was recorded based on the surveyor's expertise, geographic location, and surrounding habitat and vegetation types. Song meters were not deployed.

3.2.3 Swift Parrot

Ground surveys targeting suitable hollow-bearing trees for the Swift Parrot were undertaken throughout areas delineated during desktop mapping assessments. Trees with a DBH of more than 70 cm in diameter and a hollow entrance greater than 4 cm in diameter were considered suitable nests or diurnal roosting hollows for the species (Webb *et al.* 2012). The location of any suitable foraging habitat was recorded based on the surveyor's expertise, geographic location, and surrounding habitat and vegetation types.

3.3 Statistical analysis

A Kernel Density (KD) analysis was performed to guide changes to the proposed alignment of the multi-use trail. KD analysis identifies core areas of use based on utilisation distributions (UD) (and probability of occurrence) of points (i.e. nest site locations in this case).

4. Results

Seven raptor nests were recorded within the study area, including six Grey Goshawk nests and one Wedge-tailed Eagle nest. Several potentially suitable tree hollows for Masked Owls (Tasmanian) were also recorded. and Foraging habitats for all focal species were identified throughout the study area (Figure 1).

4.1 Grey Goshawk

One, active Grey Goshawk nest and adjacent post-fledging area was identified during the ground surveys, determined by the presence of whitewash at the base of the tree. Given the time of year, the presence of whitewash is likely associated with females prospecting and assessing nest suitability prior to the upcoming breeding season (Young, unpublished data). Five alternative nests in various states of also identified. Condition of the alternate nests identified ranged from old and disintegrated to well-maintained indicating at least one of them may have been used within the last two years. Nest sites, including the active nest, were situated in wet, relatively mature *Eucalyptus globulus* forest. All nest sites were situated on an easterly to south-easterly aspect, sheltered from strong westerly winds and within 30 m or less of the nearest watercourse (i.e. Northwest Bay River and associated tributaries). They were typical Grey Goshawk nest sites, particularly in south-east Tasmania (Brereton & Mooney 1994; Young *et al.* 2024; Young & Kirkpatrick 2024; Young pers. obs.).

All nest sites were spaced within a 250 m radius of the central nest. Importantly, the proposed multi-use trail alignment infringes on the recommended 100 m buffer zone for Grey Goshawk nest sites; (Threatened Species Section (2024), including the identified active nest (Figure 1). Additionally, post-fledging areas and patches of Grey Goshawk foraging habitat were recorded within the study area and 80 m or less of the North-West Bay River. The presence of whitewash in these areas indicated recent site utilisation. The active nest identified has been actively used for breeding by a resident pair of Grey Goshawks in the last four years (Young pers. obs.) and was probably used for many years prior to that given the high site fidelity of Grey Goshawks.

4.2 Wedge-tailed Eagle (Tasmanian)

One Wedge-tailed Eagle nest was identified during the ground surveys, determined by the size of the nest, size of the sticks and nest placement within the tree. The nest was not actively being used for breeding at the time it was identified. However, an adult pair of eagles were observed circling above the nest during the survey which suggests it may be used again in the future. No other eagle nest sites were recorded within the study area. The nest was in moderate condition in a large emergent eucalypt, situated within a Class 3 or 4 watercourse. on an easterly aspect and therefore sheltered from strong westerly winds. The nest was on a moderate to steep slope within 250 m of the Northwest Bay River and was a typical nest site location for Wedge-tailed Eagles in Tasmania. Importantly, the proposed multi-use trail alignment infringes on the recommended 500 m radius buffer zone for disturbance (for forestry activities) and the recommended reserve size of 500m diameter for Wedge-tailed Eagle nest sites in Tasmania (Forest Practices Authority 2024). However, the current trail alignment is outside of the basic reserve requirements of 180m radius (360m diameter) for eagle nest sites (Forest Practices Authority 2024).

4.3 Masked Owl (Tasmanian)

Six hollow-bearing trees within the study area were identified as potentially suitable Masked Owl nest or roost sites; however, no evidence of tree hollow utilisation was observed. All tree hollows were located within 40 m or less of the nearest watercourse (i.e. Northwest Bay River) and 20 m or less of the proposed multi-use trail alignment (Figure 1). Although the tree hollows were potentially suitable, the surrounding habitat was not typical of Masked Owl nest or roost sites (Young pers. obs.).

4.4 Swift Parrot

No hollow-bearing trees within the study area were identified as suitable Swift Parrot nesting habitat. However, several patches of suitable foraging habitat were recorded (Figure 1). The patches were

dominated by Blue Gum *Eucalyptus globulus*, Black Gum *Eucalyptus ovata* and White Gum *Eucalyptus viminalis* which represent an important food source for the Swift Parrot (Webb *et al.* 2012). The proposed multi-use trail alignment intersects one of these habitat patches including a mature *E. ovata* tree. No Swift Parrots were recorded during the ground surveys.

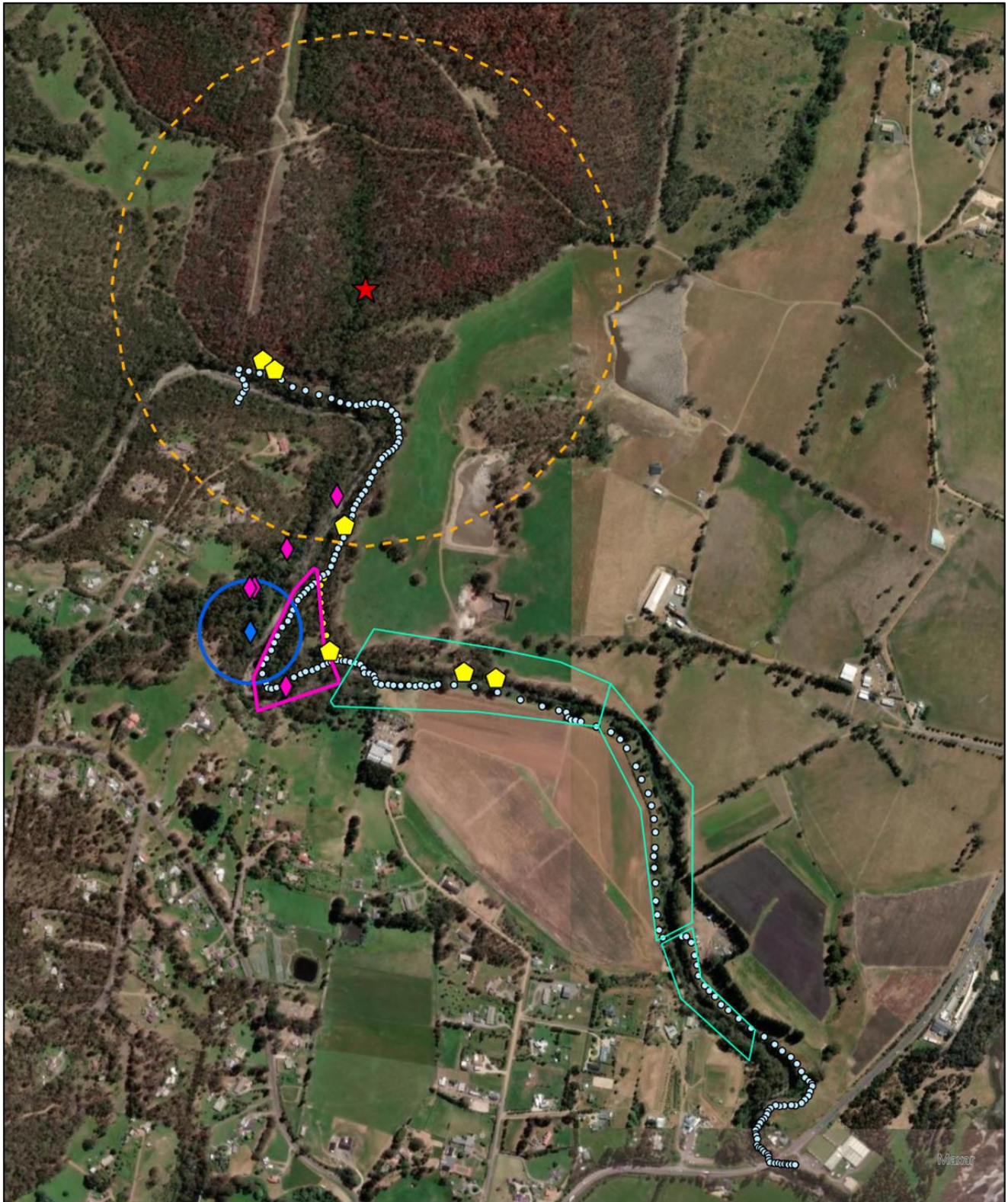


Figure 1: Map of the study area near Margate, Tasmania, illustrating survey attributes

Project No: 24135_01 **Project:** North West Bay River Trail **Date:** 1/10/2024

- | | | |
|---------------------------------------|--------------------------|-----------------------------------|
| Wedge Tailed Eagle Nest (Buffer 500m) | Wedge Tailed Eagle Nest | North West Bay Trail_Proposed |
| Swift parrot foraging habitat | Masked Owl Hollow | North West Bay Trail Proposed_New |
| Grey Goshawk | Grey Goshawk Nest | |
| Active Nest | Active Nests | |
| Grey Goshawk Post-Fledging Area | Grey Goshawk Nest | |

N
Metres
0 250
GDA 1994 MGA Zone 55

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5. Recommendations

The raptor nests, post-fledging areas, hollow-bearing trees and important foraging habitats identified in this survey present new information for the project. Recommendations based on the survey results are detailed below:

- As outlined above, the proposed multi-use trail location infringes upon the recommended 100 m buffer radius from Grey Goshawk nests. Given the high risk of disturbance to breeding Grey Goshawks, we recommend realignment of the proposed track location away from the core area of the nests identified in the Kernel Density analysis (see Figure 1) for realigned trail location.
- Installation of a fence (with star pickets) is recommended on the river side of the recommended realigned trail location.
- As outlined above, the recommended 500 m buffer radius for direct disturbance to Wedge-tailed Eagle nests in Tasmania will be violated. However, the trail is outside of the recommended reserve size. In this instance, no other suitable alignment options are available for the multi-use trail and the current alignment will result in the least potential impact given the distance of approximately 200 m from the proposed trail location and the reduced elevation between the nest location and the current trail alignment. Moreover, the nest was inactive at the time of the surveys. Taking this into account, we suggest installing signage that highlights the importance of trail users always remaining on the trail to reduce disturbance to sensitive wildlife in the area.
- Given the current trail alignment intersects a suitable Swift Parrot foraging patch (*E. ovata*), tree damage should be minimised in this area during trail construction.
- Avoid damage to hollow bearing trees during trail construction.
- Construction of the realigned section of the track should be undertaken outside of the Grey Goshawk breeding season which occurs from 1st September – 1st March.
- Trail construction below the Wedge Tailed Eagle nest should be undertaken outside of the eagle management constraint period (i.e. the core breeding season) for this sub-species in Tasmania which is from the start of July to the end of January.

6. References

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