



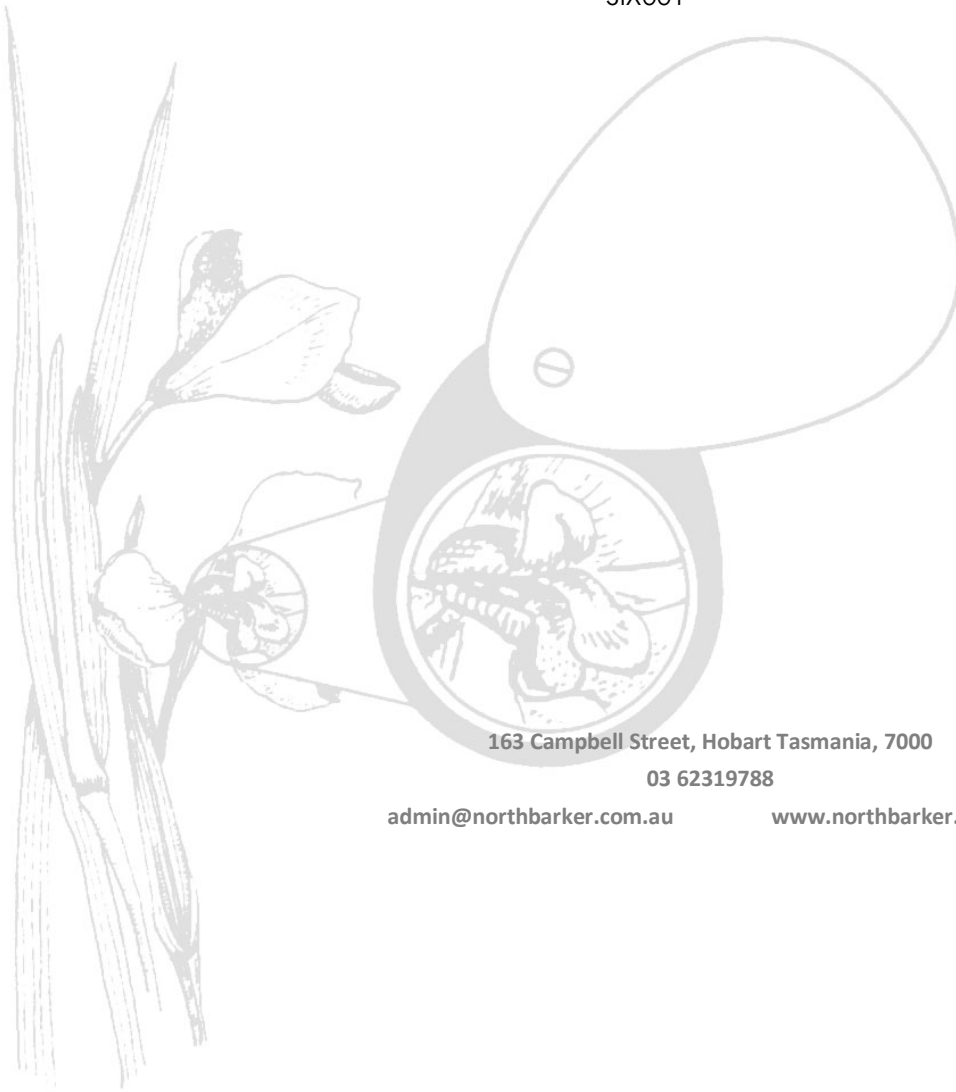
Ecclestone Road subdivision  
(38 Lots)

## Natural Values Assessment

9<sup>th</sup> February 2022

For 6ty°

SIX001



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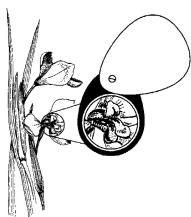
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**Report and mapping:** Richard White and Philip Barker

File Control

Version	Date	Author / Comment
Original report for PA-2019-014 (22 lot subdivision)	06/02/2019	Richard White
Internal review of draft report for 38 lot subdivision)	03/03/2020	Philip Barker
Report for 38 lot subdivision	03/03/2020	Richard White and Philip Barker
Report for 38 lot subdivision updated with design changes and information from Statement of Evidence	10/02/2022	Richard White



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## Summary

A planning permit for a 38-lot subdivision at Ecclestone Road in Riverside was granted by the West Tamar Council to the proponent in June 2021. The decision to grant the permit was appealed, and a hearing with the Tasmanian Civil and Administrative tribunal was conducted. The tribunal amended conditions on the development planning permit, and the amended permit was granted in December 2021. This Natural Values Report has been updated with information used in the Statement of Evidence in the tribunal hearing and refers to the permit conditions where relevant.

The proposal will involve the conversion of ~16 ha of native vegetation for building areas and bushfire hazard management. Up to 30 % of each of the lots and over 90 % of the balance will be protected as a Natural Values Protection Area under Part 5 agreements; this is ~21 ha (or 57%) of the project area.

Additional information regarding the natural values present, impact and mitigation measures can be found in the addendum to the natural values report and the Statement of Evidence. Mitigation measures are primarily realised as permit conditions in the amended planning permit issued by the West Tamar Council; these have not been included in detail in this report.

### Vegetation communities

The planned development will remove 11.8 and 4.1 ha of the DAD and NBA vegetation communities, respectively. Neither of these communities are protected under any Act.

### Threatened flora

A total of 50 plants of *Brunonia australis* (TSPA rare) were recorded in the impact area. A 'permit to take' from DPIPWE will be required to remove these plants.

There are NVA records of *Poa mollis* in three locations in the proposal area. This species has not however been recorded during NBES surveys and it is not likely it occurs. Regardless, all previous records are outside the proposed impact area.

No flora listed under the EPBCA were recorded or are expected to occur.

### Threatened fauna

The proposal area contains habitat for several threatened fauna species listed under the TSPA and EPBCA: Tasmanian wedge-tailed eagle, Tasmanian masked owl, Tasmanian devil and quolls, and eastern barred bandicoot.

A wedge-tailed eagles' nest was recorded in the proposal area after the initial natural values surveys were conducted. There has been no evidence of the nest being utilized by this species and given the characteristics of the tree, the location and the nest itself, it is quite possible this nest will never be used for breeding. The nest is about 220 m from the nearest occupied residential lot on an adjacent title and 190 m from Ecclestone Road. The proposal would result in the nest being ~220 m the nearest new residence. The nest will be no closer than it is now to existing development, but the density of the proposed development will be higher than existing development.

The habitat is suitable for Tasmanian masked owl but surveys conducted in August 2021 did not record this species. Six trees were recorded in the proposal area that contain hollows that are potentially suitable for Tasmanian masked owl. One of these is in the proposed impact area. Impact to this species by the proposal is not expected to be significant.

The area is suitable for foraging and breeding for Tasmanian devil and quolls. There is a sighting of Tasmanian devil in the north west of the project area. No dens suitable for these species were located during the surveys and as such no impact on dens is anticipated. Regardless, additional den searches will be undertaken prior to the beginning of land clearance works to confirm the continuing absence of dens because dens may be established in the intervening period. Permit conditions stipulate a pre-clearance survey for dens and processes to follow should potential dens be found.

The proposed impact to potential foraging habitat for any of these species is not expected to be significant and the retention of 21 ha of the 37 ha site with the majority of the 21 ha to be protected being in a continuous area, will significantly mitigate the impact of the proposal on native foraging habitat.

Eastern barred bandicoot has been recorded in the proposed impact area. The scale of the development (~16 ha) is unlikely to cause a significant impact on the population either in the vicinity or in total. Predation by domestic pets is likely to result in some animals being killed from time to time although the proximity to protected habitat on each lot will provide some protection and avenue of escape from pets.

Based on the current proposal and the current knowledge of the Matters of National Environmental Significance present the impact is unlikely to be significant. Regardless, the project will be referred to the Commonwealth for consideration under the EPBCA.

The project is subject to the West Tamar Planning Scheme 2013. There are no apparent impediments to the development in the provisions of the scheme regarding natural values.

## Contents

1	Introduction .....	6
1.1	Background .....	6
1.2	Proposal area .....	6
2	Methods.....	9
2.1	Botanical surveys .....	9
2.2	Fauna surveys .....	9
2.3	Limitations.....	10
3	Results.....	10
3.1	Vegetation communities .....	10
3.1.1	DAD - <i>Eucalyptus amygdalina</i> forest and woodland (23.44 ha, Plate 1) .....	10
3.1.2	DVG - <i>Eucalyptus viminalis</i> grassy forest and woodland (0.87 ha) .....	11
3.1.3	DOV - <i>Eucalyptus ovata</i> forest and woodland (1.17 ha).....	12
3.1.4	NBA - <i>Bursaria</i> - <i>Acacia</i> woodland and scrub (11.32 ha, Plate 3).....	12
3.2	Threatened flora .....	14
3.3	Threatened fauna and threatened fauna habitat .....	25
3.4	Declared weeds .....	36
4	Assessment of impact and mitigation .....	38
4.1	Vegetation communities .....	<b>Error! Bookmark not defined.</b>
4.2	Threatened flora .....	38
4.3	Threatened fauna and threatened fauna habitat .....	38
4.3.1	Tasmanian devil.....	39
4.3.2	Spotted-tailed quoll .....	40
4.3.3	Eastern quoll .....	40
4.3.4	Eastern barred bandicoot.....	40
4.3.5	Tasmanian wedge-tailed eagle.....	39
4.3.6	Tasmanian masked owl.....	39
5	Legislation.....	41
5.1	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> ...	41
5.2	Tasmanian <i>Threatened Species Protection Act 1995</i> .....	41
5.3	Tasmanian <i>Nature Conservation Act 2002</i> .....	41
5.4	Tasmanian <i>Weed Management Act 1999</i> .....	41
5.5	West Tamar Interim Planning Scheme 2013 .....	42
6	Conclusion and recommendations.....	42
	References.....	44
	Appendix A: Plant species recorded in the proposal area .....	46

# 1 Introduction

## 1.1 Background

In 2018, 6ty° Pty Ltd requested North Barker Ecosystem Services (NBES) conduct a natural values assessment for a proposed 22-lot subdivision on Ecclestone Road, Riverside (Property ID 7655464, Title Reference 43468/1). Initially, the proposal area was surveyed on two occasions, including a seasonal survey for *Brunonia australis* (listed as rare under the Tasmanian Threatened Species Protection Act 1995 (TSPA)). A report on the findings that included a discussion on impacts was submitted in February 2019<sup>1</sup>.

Representations were submitted to the West Tamar Council in response to the development application; these expressed a range of concerns, particularly the potential impact to natural values. NBES submitted an addendum to the natural values report to address these concerns: the addendum provided more detail on the natural values in the proposed subdivision area and the potential impact<sup>2</sup>. Additionally, the West Tamar Council sought external expert review of the planning documentation, specifically regarding the aforementioned NBES natural values report and addendum, and the representations<sup>3</sup>. Relevant outcomes from those assessments are included in this report.

Subsequently, the design of the subdivision was adjusted from a 22-lot to a 38-lot subdivision. The Natural Values Assessment report and other documentation were updated accordingly. The proponent then reapplied for a development application with the new design with the West Tamar Council. A permit for the development was granted, containing conditions that included the retention of native vegetation in a portion of each lot and in most of the balance lot. However, an appeal against West Tamar Council's decision to approve the subdivision was lodged and referred to the Resource Management and Planning Appeal Tribunal. A Statement of Evidence was prepared by Dr. Philip Barker from NBES for the tribunal hearing, and additional natural values surveys were undertaken to support this preparation<sup>4</sup>. Subsequent to the tribunal hearing a planning permit with amended conditions was issued<sup>5</sup>

This Natural Values Assessment report includes updated data and information on natural values gained from additional surveys and effort in the preparation of the addendum and the Statement of Evidence.

## 1.2 Proposal area

The proposal area is in Riverside, Launceston in northern Tasmania (Figures 1 and 2). It is in the Tasmanian Northern Midlands bioregion<sup>6</sup> in the West Tamar City Council. The total proposal area is 36.8 ha: this comprises 37 residential lots with internal access road and a balance (lot 38). As a condition of approval, some of the lots (20-30%), and most of the balance will not be developed (Figure 2)<sup>7</sup>.

The mean annual rainfall for Launceston (Kings Meadows) is 693 mm (Bureau of Meteorology). The site is at ~ 170 m asl and is relatively flat with a gentle north-east aspect. There is a small creek in the south east of the proposal area. The geology is Jurassic dolerite.

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<sup>1</sup> NBES (2019)

<sup>2</sup> NBES (2020a)

<sup>3</sup> ECOtas (2020)

<sup>4</sup> Barker (2022)

<sup>5</sup> West Tamar Council (2021)

<sup>6</sup> IBRA 7 (2012)

<sup>7</sup> West Tamar Council (2021)

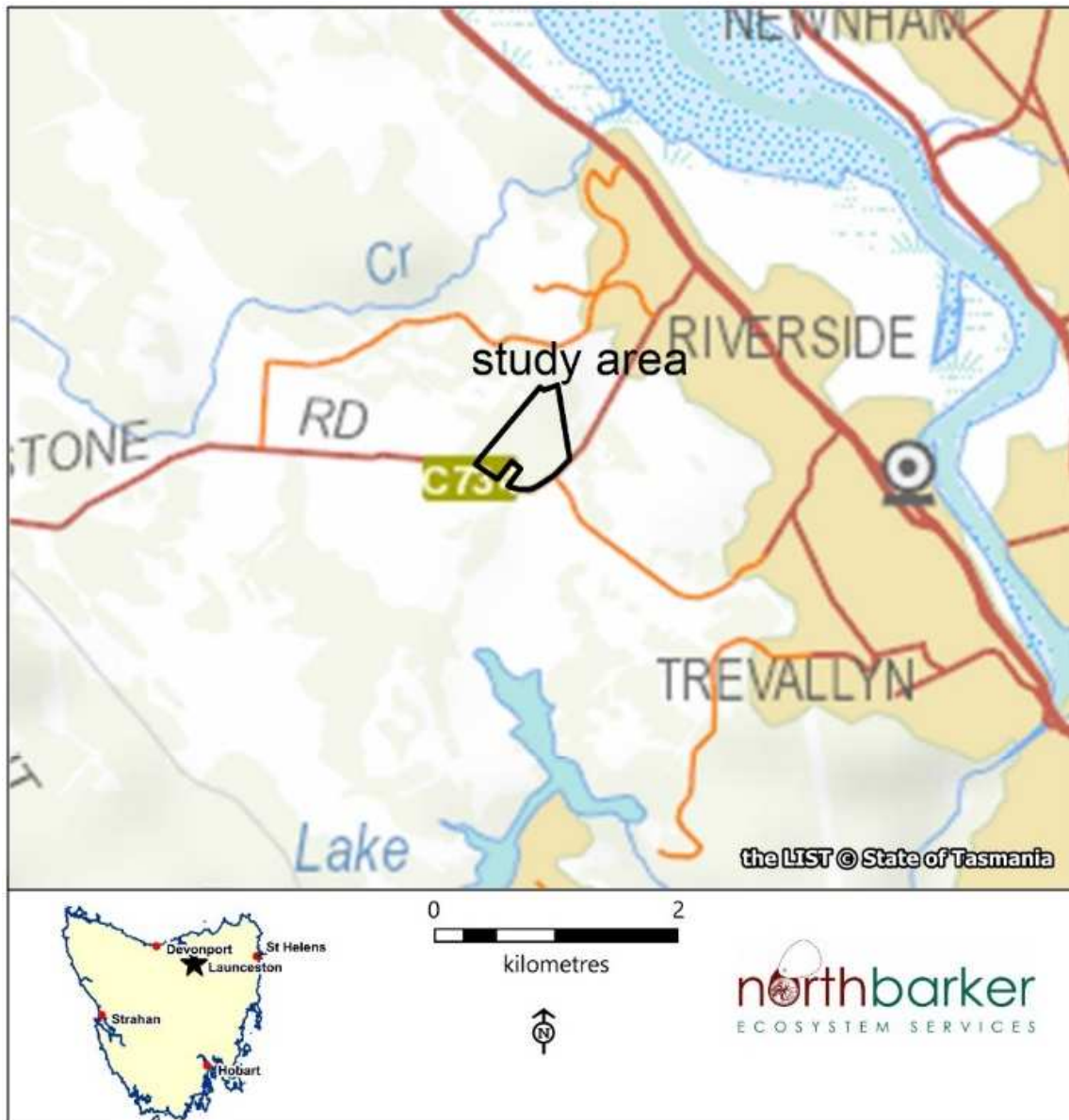


Figure 1: proposal area near Riverside in Launceston

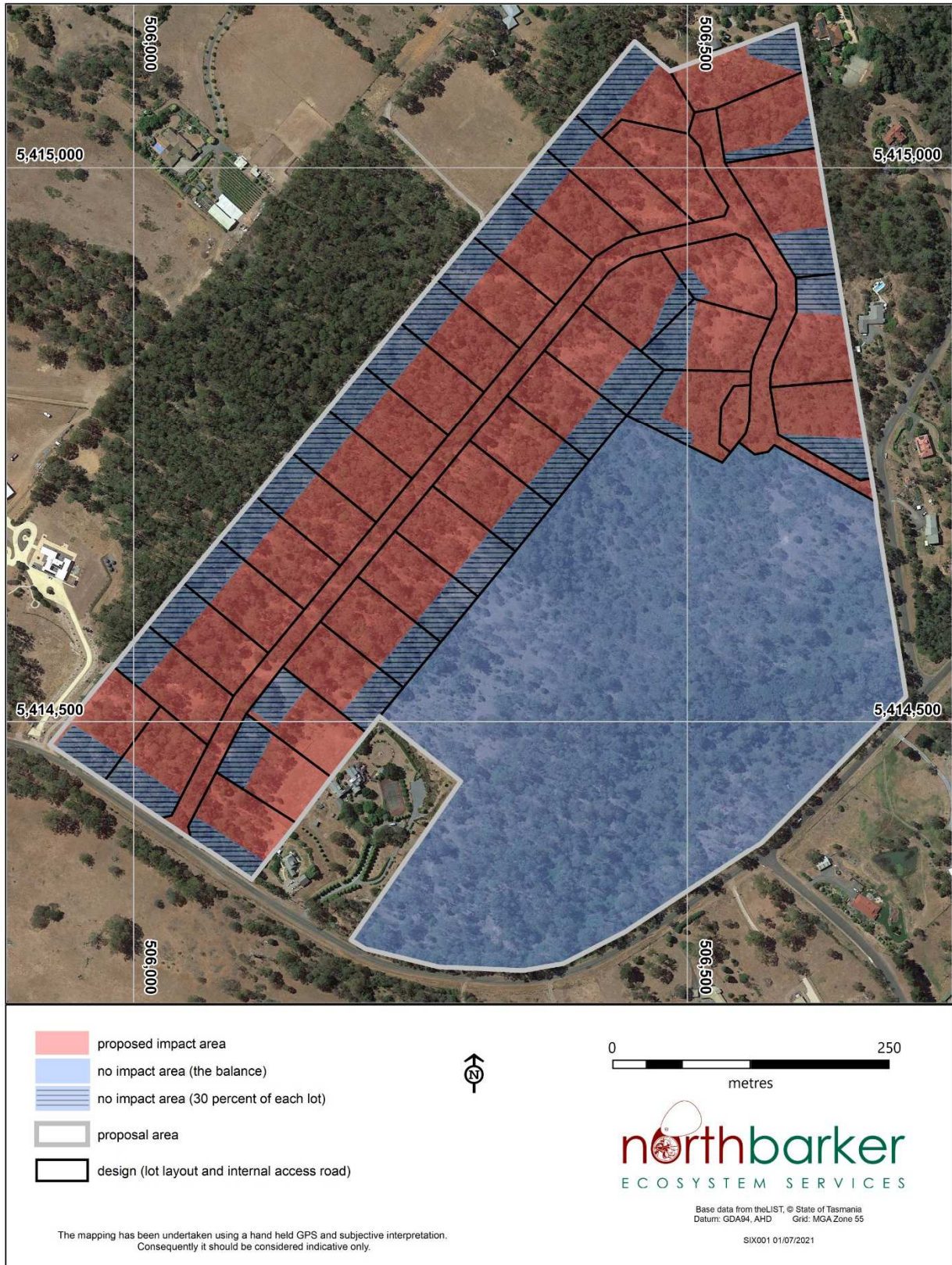


Figure 2: The Ecclestone Road proposal area showing the 38-lot design

## 2 Methods

This assessment was undertaken in accordance with the *Guidelines for Natural Values Surveys*<sup>8</sup>. The following sources were used for biological records for the region:

- TASVEG version 4.0 digital layer<sup>9</sup>;
- Natural Values Atlas database (NVA) - all threatened species records within 5 km of the proposal area and threatened fauna considered possible to occur in suitable habitat<sup>10</sup>;
- EPBCA Matters of National Environmental Significance database - a 5 km buffer was used to search for potential values<sup>11</sup>;

### 2.1 Botanical surveys

Field work was carried out on the 26<sup>th</sup> of June 2018 and on 13<sup>th</sup> November 2018 (the latter specifically for *Brunonia australis*). Native vegetation was mapped in accordance with units defined in TASVEG 4.0<sup>12</sup>. Vascular plants were recorded in accordance with the current census of Tasmanian plants<sup>13</sup>. The site was mapped using a meandering area search technique<sup>14</sup>. Particular attention was given to habitats suitable for threatened species under the *Tasmanian Threatened Species Protection Act 1995* (TSPA) and/or the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBCA), and to 'declared' weeds under the *Tasmanian Weed Management Act 1999* (WMA)<sup>15</sup>.

### 2.2 Fauna surveys

In the 2018 survey, a search was made concurrently with the botanical survey for sign (e.g. scats, tracks), habitat and presence of potential threatened fauna. This included a search for nests and tree hollows from the ground only. The surveys were carried out in accordance with DPIPWE's 'Survey guidelines and management advice for development proposals that may impact on the Tasmanian devil (*Sarcophilus harrisii*)'.

Since the survey in June 2018, a Tasmanian wedge-tailed eagle's nest was discovered on the property (this species is listed as endangered under the TSPA and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBCA)). This nest was assessed by two observers from NBES on 1 November 2019. The site was again revisited by a North Barker ecologist on the 5<sup>th</sup> of May 2020; the aim of that visit was for one of the representors (Alison Marshall) to share her knowledge of the site, particularly the location of hollow bearing trees suitable for Tasmanian masked owl (TSPA endangered and EPBCA vulnerable).

In August 2021 and prior to the tribunal hearing, the site was assessed with the aim of determining the most attractive areas for dens; at this time the eagle's nest in the balance area was also inspected. Later in this month, an additional targeted survey for dens in the proposed impact area was undertaken.

Surveying for masked owl was also conducted in August 2021. Trees known to have hollows and trees suspected of having hollows suitable for masked owl were tapped hard in attempt to flush an owl out of any hollow that may be present. This is an unpublished but generally accepted technique to assist in establishing whether a hollow is being utilised. A call back survey was also undertaken. On the two consecutive survey nights, the call was broadcast a

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<sup>8</sup> DPIPWE 2015

<sup>9</sup> Kitchener and Harris 2013

<sup>10</sup> DPIPWE Natural Values Atlas Report, nvr\_4\_02-Dec-2020

<sup>11</sup> Commonwealth of Australia, EPBC Protected Matters Search Tool Report, 2018 (report PMST\_WMVSBO)

<sup>12</sup> Kitchener and Harris 2013

<sup>13</sup> de Salas and Baker 2020

<sup>14</sup> Goff *et al.* 1982

<sup>15</sup> Tasmanian State Government 1995; Commonwealth of Australia 1999

through a speaker and then the ecologist waited in silence for a response. A songmeter programmed to record masked owl calls from dusk until dawn was deployed in a suitable area near a large eucalypt for a two-week period (19 August – 2 September).

### 2.3 Limitations

Due to various limitations (e.g. variations in species presence and detectability), no biological survey can guarantee that all species will be recorded during a single visit. The field surveys were undertaken in winter and spring, so seasonal and ephemeral species may have been overlooked or are seasonally absent, including summer flowering species. However, we are confident the surveys sufficiently captured community level diversity. We compensate for survey limitations in part by considering all listed threatened species from data from the *Tasmanian Natural Values Atlas (NVA)*<sup>16</sup>. These data include records of all threatened species known to occur, or with the potential to occur, up to 5 km from the proposal area.

## 3 Results

### 3.1 Vegetation communities

The following TASVEG communities occur in the proposal area (Figure 3):

- DAD - *Eucalyptus amygdalina* forest and woodland (23.44 ha)
- DVG - *Eucalyptus viminalis* grassy forest and woodland (0.87 ha)
- DOV - *Eucalyptus ovata* forest and woodland (1.17 ha)
- NBA - *Bursaria* - *Acacia* woodland and scrub (11.32 ha)

DAD, DVG and NBA are not listed under any Act. DOV is listed as threatened under the NCA. Under the EPBCA, DOV is also referred to as *Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana* where it is listed as critically endangered. Notably, the DOV in the proposal area is a *E. viminalis*-dominated facies with very sparse *E. ovata* and does not meet the key diagnostic characteristics used to identify the EPBCA-listed *E. ovata* community protected under that act<sup>17</sup> – see more under 3.1.3. below. The DVG and NBA are considered to be underrepresented in the National Reserve System's (NRS) based on the Comprehensive Adequate and Representative criteria (CAR). Although DVG and NBA do not have 15% of the pre-European extent reserved they are widespread and extensive and so are not considered to be threatened.

#### 3.1.1 DAD - *Eucalyptus amygdalina* forest and woodland (23.44 ha, Plate 1)

This is the most prevalent community in the proposal area. The canopy is dominated by *Eucalyptus amygdalina* with *E. viminalis* occasional. The trees belong to several cohorts, and while occasional larger trees (> 100 cm DBH) are present, most trees are in the 40-70 cm DBH range. There has been selective clearing in this community in the past with some areas having been extensively cleared. The canopy is generally in good health. Regular understorey species include *Acacia dealbata* and *Exocarpos cupressiformis*. In large areas the ground cover is dominated by either *Pteridium esculentum* or *Gahnia radula*. Introduced species are common, the most notable of which is blackberry (*Rubus fruticosus*), which has formed infestations in places. In the south east of the proposal area some areas of this community have been used for dumping, and a few corrugated iron structures remain (Plate 2). The threatened *Brunonia australis* (TSPA rare) occurs in this community.

This community is not listed under any Act.

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<sup>16</sup> DPIPWE Natural Values Atlas Report, nvr\_4\_02-Dec-2020

<sup>17</sup> Commonwealth of Australia 2020



**Plate 1: DAD in the proposal area**



**Plate 2: Corrugated iron structures and rubbish in the DAD in the south west of the proposal area**

### 3.1.2 DVG - *Eucalyptus viminalis* grassy forest and woodland (0.87 ha)

A small patch of this community occurs in the south west of the proposal area, upslope from the moist areas along the watercourse. *Eucalyptus viminalis* is the canopy dominant, with *E. amygdalina* occasional. Trees are generally in the 50-70 cm DBH range and are in good health. Regular understorey species include *Bursaria spinosa* and *Exocarpos cupressiformis*. The ground cover is dominated by grasses, particularly *Poa labillardierei*; *Lepidosperma laterale* is also common. Blackberry (*Rubus fruticosus*) has formed infestations on the fence line.

This community is not listed under any Act.

### 3.1.3 DOV - *Eucalyptus ovata* forest and woodland (1.17 ha)

This community occurs in the moist drainage line in the south west of the proposal area. While *E. viminalis* is the canopy dominant and *E. ovata* is very sparse, this community is mapped as DOV rather than DVG due to the sedge-dominated understorey: DVG is only described with a grassy understorey and the description of DOV allows for *E. viminalis* as the only dominant<sup>18</sup>. On the creek line the understorey is dominated by *Melaleuca ericifolia*, while upslope drier habitat species such as *Bursaria spinosa* and *Acacia dealbata* occur. *Gahnia radula*, and *Lepidosperma* spp. dominate the ground cover layer. Introduced species are sparse.

This is a threatened community under the NCA. This *E. viminalis*-dominated facies with very sparse *E. ovata* does not satisfy the key diagnostic characteristics used to identify the EPBCA-listed *E. ovata* community protected under that act<sup>19</sup>.

### 3.1.4 NBA - *Bursaria* - *Acacia* woodland and scrub (11.32 ha, Plate 3)

This community occurs in drier sites, occupying much of the central part of the proposal area. The canopy consists largely of *Acacia mearnsii*, and *A. dealbata*. This community is generally species poor. Large areas of the ground cover are dominated by *Gahnia radula*. Rocky areas with areas of shallow soil are in poor condition and there is no potential for threatened specialist rockplate species; *Cheilanthes austrotenuifolia* was common in these areas. A range of widespread introduced species are present (e.g. *Hypochaeris radicata*, *Lysimachia arvensis*) but declared weeds are largely absent.

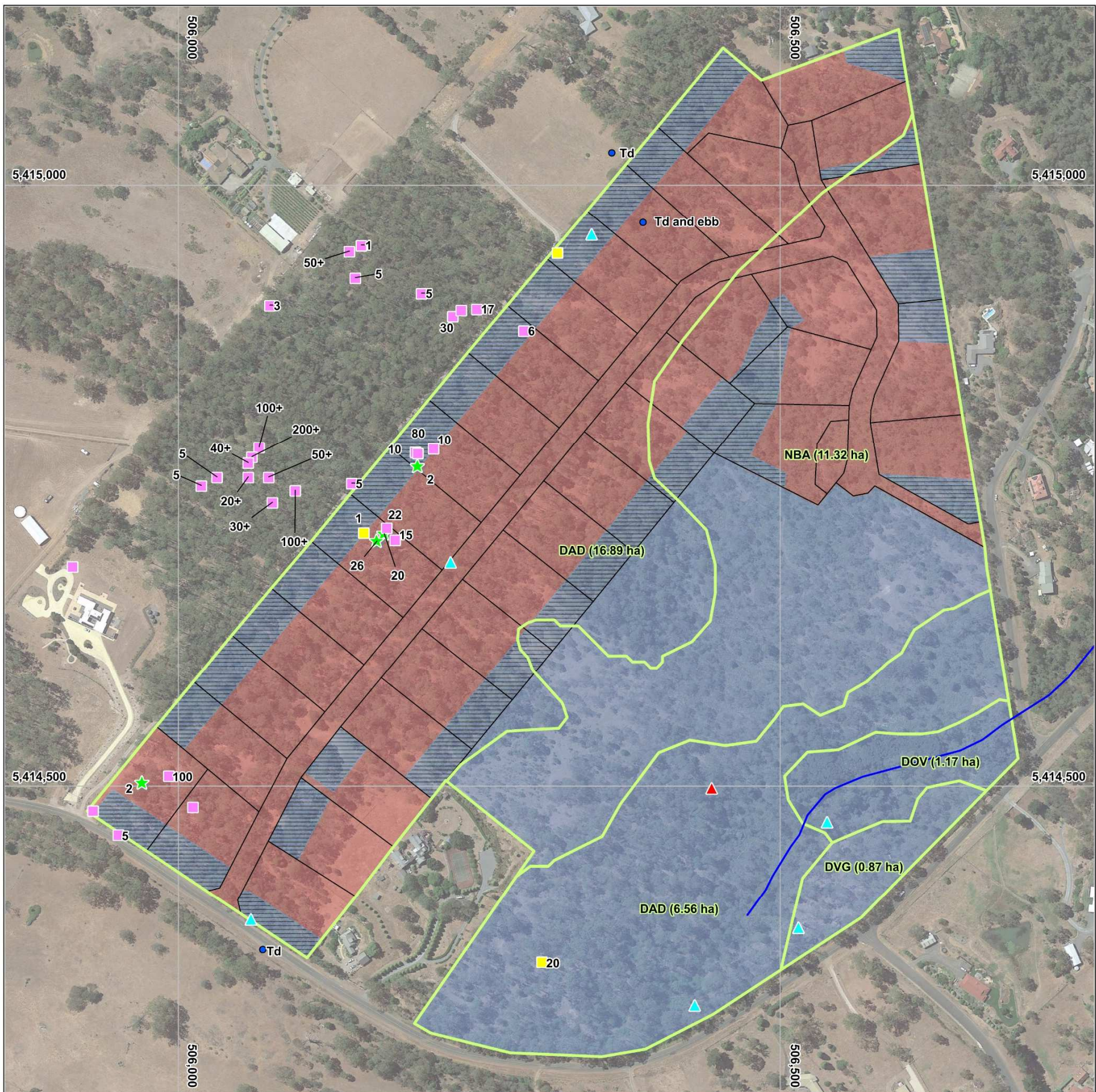


**Plate 3: NBA in the proposal area**

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<sup>18</sup> Kitchener and Harris 2013

<sup>19</sup> Commonwealth of Australia 2020



**Threatened Flora - NBES survey**

Status (TSPA/EPBCA)

- ★ *Brunonia australis* (r/) with no. of plants

**Threatened Flora - Natural Values Atlas**

Status (TSPA/EPBCA)

- *Brunonia australis* (r/-) with no. of plants if provided
- *Poa mollis* (r/-) with no. of plants if provided

**Threatened Fauna Habitat - NBES Survey**

Status (TSPA/EPBCA)

- ▲ Eucalyptus with hollow potential suitable for masked owl (e/VU)

**Threatened Fauna Habitat - Natural Values Atlas**

Status (TSPA/EPBCA)

- ▲ Wedge-tailed eagle nest and sighting (e/EN)

**Threatened Fauna - Natural Values Atlas**

Status (TSPA/EPBCA)

- Td - Tasmanian devil (e/EN)
- ebb - eastern barred bandicoot (-/VU)

**Vegetation Communities (with area in ha)**

(Tasveg 4.0)

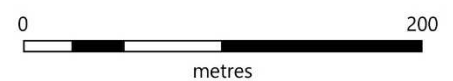
- (DAD) Eucalyptus amygdalina forest and woodland
- (DOV) Eucalyptus ovata forest and woodland
- (DVG) Eucalyptus viminalis grassy forest and woodland
- (NBA) Bursaria - Acacia woodland and scrub
- impact area (lots 1-37 plus internal access rd)
- no impact area balance (lot 38)
- no impact area (30 percent of each lot)

— creekline

Design

Source: Sty° 23/11/2020

□



**northbarker**  
ECOSYSTEM SERVICES

The mapping has been undertaken using a hand held GPS and subjective interpretation. Consequently it should be considered indicative only.

Base data from theLIST, © State of Tasmania  
Datum: GDA84, AHD Grid: MGA Zone 55

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Figure 3: Threatened flora and fauna and vegetation values at the proposed Ecclestone Road subdivision

### 3.2 Threatened flora

A total of 99 species of vascular plants were recorded in the proposal area (Appendix A). Fifty plants of the threatened *Brunonia australis* (TSPA rare) occur in four locations (Figure 3 above, Plate 4). These records are close to previous records (from 2010). A targeted search was carried out in all areas of potential habitat, including previous locations of this species in the proposal area; in three of the previous locations no plants were located, but two these locations had a location accuracy of > 100 m. Regardless, we are confident that we have assessed the likely current extent of this species in the proposal area. Since the initial 2018 survey, several hundred plants were recorded in the less disturbed patch immediately west of the proposal area (NVA records and pers. comm. Mark Wapstra).

*Poa mollis*, also TSPA rare, has also been previously recorded in two locations the proposal area (21 plants in 2010, Figure 3). This species was not located in these areas in the NBES surveys. The similar *Poa rodwayi* and *P. labillardierei* were recorded in these areas and may have displaced or been misidentified as this species. Given the survey effort and result, the likelihood of *Poa mollis* occurring on the site is considered low. Additional comment provided in the addendum<sup>20</sup> the external expert review report<sup>21</sup> and the Statement of Evidence<sup>22</sup> do not conflict with this conclusion.

No additional threatened species have been recorded within 500 m of the proposal area. However, several species have been recorded within 5000 m, as well as a number of species that are considered to have potential habitat in the region according to the EPBCA Protected Matters Search Tool. Each of these threatened flora species are presented in Table 1 in context of the suitability of habitat within the proposal area, and the likelihood of occurrence.



**Plate 4: *Brunonia australis* in the proposal area**

<sup>20</sup> NBES (2020a)

<sup>21</sup> ECOtas (2020)

<sup>22</sup> Barker (2022)

**Table 1: Flora species of conservation significance known to occur, or which may potentially occur based on range boundaries, within a 5 km radius of the proposal areas.**

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
<i>Alternanthera denticulata</i> lesser joyweed	Endangered/ -	LOW	<i>Alternanthera denticulata</i> displays a preference for rocky (dolerite) river margins, but has also been recorded from disturbed <i>Melaleuca ericifolia</i> swamp forest and damp riparian grasslands. Suitable habitat on site is limited and sub-optimal for this species and it is unlikely to have been overlooked.
<i>Anogramma leptophylla</i> annual fern	Vulnerable/ -	NONE	<i>Anogramma leptophylla</i> grows in shallow soil layers over rock, on exposed or semi-exposed outcrops in dry or damp sclerophyll forest. Plants are mostly found on rock ledges, often on, or just inside, the drip line of the overhead rock-face. The substrate is variable, including dolerite, basalt and sandstone. No suitable habitat in the proposal area.
<i>Aphelia gracilis</i> slender fanwort	Rare/ -	NONE	<i>Aphelia gracilis</i> inhabits damp sandy ground and wet places in the Midlands and north-east of the State. It may readily colonise sites after fire or other disturbance. No suitable habitat on site.
<i>Aphelia pumilio</i> dwarf fanwort	Rare/ -	VERY LOW	<i>Aphelia pumilio</i> is found growing on damp flats, often with impeded drainage. The main vegetation types are lowland grassland ( <i>Themeda triandra</i> ) and dry sclerophyll forest and woodland dominated by <i>Eucalyptus viminalis</i> , <i>E. amygdalina</i> or <i>E. ovata</i> . Suitable habitat on site is very limited and it is not likely this species occurs.
<i>Barbarea australis</i> riverbed wintercress	endangered/ -	NONE	<i>Barbarea australis</i> is a riparian species found near river margins, creek beds and along flood channels adjacent to the river. It tends to favour the slower reaches, and has not been found on steeper sections of rivers. It predominantly occurs in flood deposits of silt and gravel deposited as point bars and at the margins of base flows, or more occasionally or between large cobbles on sites frequently disturbed by fluvial processes. Some of the sites are a considerable distance from the river, in flood channels scoured by previous flood action, exposing river pebbles. Most populations are in the Central Highlands, but other populations occur in the north-east and upland

<sup>23</sup> Threatened Species Section (2018)

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
			areas in the central north. Not recorded within 5 km. No suitable habitat in the proposal area.
<i>Blechnum spinulosum</i> small raspfern	Endangered/ -	NONE	<i>Blechnum spinulosum</i> is an erect tufted fern, known from a few rivers in northern Tasmania. The species is strictly riparian in habitat, occurring amongst boulders and along shaded banks of rivers and creeks. In Tasmania, it is known to be extant at three locations: River Leven, Pipers River and the lower reaches of the South Esk River near Launceston. No suitable habitat in the proposal area.
<i>Bolboschoenus caldwellii</i> sea clubsedge	Rare/ -	NONE	<i>Bolboschoenus caldwellii</i> is widespread in shallow, standing, sometimes brackish water, rooted in heavy black mud. No suitable habitat in the proposal area.
<i>Boronia gunnii</i> river boronia	Vulnerable/ VULNERABLE	NONE	<i>Boronia gunnii</i> is strictly riparian in habitat, occurring in the flood zone of the Apsley, St Pauls, and Dukes rivers (where extant) and the Denison Rivulet and South Esk River (where presumed extinct) in rock crevices or in the shelter of boulders. The base substrate is always dolerite. No suitable habitat on site.
<i>Caesia calliantha</i> blue grasslily	Rare/ -	LOW	<i>Caesia calliantha</i> is found predominantly in the Midlands in grassland or grassy woodland including wattle and prickly box "scrub" (occasionally extending into forest, then usually dominated by <i>Eucalyptus viminalis</i> or <i>E. amygdalina</i> ). It has also been recorded from grassy roadsides. While some habitat occurs in the proposal area, all potential areas were searched at the optimum time of year; it is a distinctive species and is unlikely to have been overlooked.
<i>Caladenia caudata</i> tailed spider-orchid	vulnerable/ VULNERABLE	VERY LOW	<i>Caladenia caudata</i> has highly variable habitat, which includes the central north: <i>Eucalyptus obliqua</i> heathy forest on low undulating hills; the north-east: <i>E. globulus</i> grassy/heathy coastal forest, <i>E. amygdalina</i> heathy woodland and forest, <i>Allocasuarina</i> woodland; and the south-east: <i>E. amygdalina</i> forest and woodland on sandstone, coastal <i>E. viminalis</i> forest on deep sands. Substrates vary from dolerite to sandstone to granite, with soils ranging from deep windblown sands, sands derived from sandstone and well-developed clay loams developed from dolerite. A high degree of insolation is typical of many sites. Not recorded within 5 km. The habitat on

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
			site is sub optimal for this species and it is unlikely to occur. The survey time was during flowering for this species and it is distinctive and unlikely to have been overlooked.
<i>Callitris oblonga</i> subsp. <i>oblonga</i> south esk pine	Vulnerable/ ENDANGERED	NONE	<i>Callitris oblonga</i> subsp. <i>oblonga</i> occurs predominantly in riparian scrub, woodland and forest (where it can extend away from rivers) in areas with low precipitation and usually sandy soil. It is local on the East Coast, particularly on the margins of the Swan, Apsley, South Esk, Cygnet and St Pauls rivers. A small population is also present in Cataract Gorge. This is a large, distinctive species that unlikely to have been overlooked.
<i>Calochilus campestris</i> copper beard-orchid	Endangered/ -	NONE	On mainland Australia, <i>Calochilus campestris</i> occurs on ridges and slopes in forest and woodland and can also be found in coastal heath and headlands. The species is known to colonise embankments and road verges. The habitat in Tasmania is poorly understood. There is only a single record of this species for Tasmania and it is highly unlikely that it occurs in the proposal area.
<i>Calystegia sepium</i> swamp bindweed	Rare/ -	VERY LOW	<i>Calystegia sepium</i> has been recorded from riverbanks and the margins of forests in the north of the State around the Tamar region, where it mainly occurs in <i>Melaleuca ericifolia</i> swamp forest and amongst <i>Phragmites australis</i> swampland. This is a distinctive perennial vine and is highly unlikely to have been overlooked.
<i>Carex gunniana</i> mountain sedge	Rare/ -	LOW	The habitat of <i>Carex gunniana</i> is poorly understood and highly variable. It includes wet eucalypt forest, sandy heathlands, margins of streams, littoral sands, shingle with seepage, damp grasslands within dry forest and rough pasture. No sedges that resemble this species were found during the survey, and it unlikely to have to have been overlooked.
<i>Carex longebrachiata</i> drooping sedge	Rare/ -	LOW	<i>Carex longebrachiata</i> grows along riverbanks, in rough grassland and pastures, in damp drainage depressions and on moist slopes amongst forest, often dominated by <i>Eucalyptus viminalis</i> , <i>E. ovata</i> or <i>E. rodwayi</i> . No sedges that resemble this species were found during the survey, and it unlikely to have to have been overlooked.
<i>Centipeda cunninghamii</i> erect sneezeweed	Rare/ -	NONE	<i>Centipeda cunninghamii</i> is found in a wide variety of soil types, usually in areas subject to flooding or where water is stagnant. The seasonally dry margins of wetlands and lagoons also have the potential to support this species. No suitable habitat in the proposal area.

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
<i>Chiloglottis trapeziformis</i> broadlip bird-orchid	Endangered/ -	VERY LOW	<i>Chiloglottis trapeziformis</i> is known from near Wynyard on sandy soil in damp sclerophyll forest. There is a historical record from dry open forest near Legana. It has also been recorded from <i>Leptospermum</i> (teatree) and <i>Allocasuarina</i> (sheoak) scrub on sandy humus overlying granite on Great Dog Island (Furneaux group). While this species occurs in a range of habitats there are very few records from Tasmania and the chances of this species occurring in the proposal area are very low.
<i>Dianella amoena</i> grassland flaxlily	Rare/ ENDANGERED	VERY LOW	<i>Dianella amoena</i> occurs mainly in the northern and southern Midlands, where it grows in native grasslands and grassy woodlands. Suitable habitat was limited in the proposal area. This is a distinctive species and it is highly unlikely that it was overlooked.
<i>Discaria pubescens</i> spiky anchorplant	Endangered/ -	NONE	<i>Discaria pubescens</i> is found sporadically in the Midlands and more abundantly in drier parts of the Central Highlands. It grows on sandy or gravelly soil, in basalt talus slopes and clefts amongst fractured dolerite rocks and flood channels. Many sites are in rough pasture, and it also grows on roadsides. Recent collections indicate the species is occasionally associated with sandstone outcrops. No suitable habitat in the proposal area.
<i>Diuris palustris</i> swamp doubletail	Endangered/ -	NONE	<i>Diuris palustris</i> occurs in coastal areas in grassy open eucalypt forest, sedgy grassland and heathland with <i>Leptospermum</i> (teatree) and <i>Melaleuca</i> (paperbark) on poorly- to moderately-drained sandy peat and loams, usually in sites that are wet in winter. No suitable habitat in the proposal area.
<i>Epacris exserta</i> south esk heath	Endangered/ ENDANGERED	NONE	<i>Epacris exserta</i> occurs along the lower reaches of the South Esk, North Esk and Supply rivers. It is a strictly riparian species that grows in areas subject to periodic inundation, mainly on alluvium amongst dolerite boulders within dense riparian scrub, and occasionally in open rocky sites. It has been recorded from 10-310 m above sea level. No suitable habitat in the proposal area.
<i>Epilobium pallidiflorum</i> showy willowherb	No longer listed/ -	LOW	This species is no longer listed.
<i>Glycine latrobeana</i> clover glycine	vulnerable/ VULNERABLE	VERY LOW	<i>Glycine latrobeana</i> occurs in a range of habitats, geologies and vegetation types. Soils are usually fertile but can be sandy when adjacent to or overlaying fertile soils. The

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
			species mainly occurs on flats and undulating terrain over a wide geographical range, including near-coastal environments, the Midlands, and the Central Plateau. It mainly occurs in grassy/heathy forests and woodlands and native grasslands, and favours areas of loose sandy soil. No records within 5 km. The habitat for this species is sub-optimal and it is unlikely to occur.
<i>Gratiola pubescens</i> hairy brooklime	Vulnerable/ -	NONE	<i>Gratiola pubescens</i> is most commonly located in permanently or seasonally damp or swampy ground, including the margins of farm dams. There is no suitable habitat in the proposal area.
<i>Gyrostemon thesioides</i> broom wheelfruit	Rare/ -	NONE	<i>Gyrostemon thesioides</i> occurs predominately on dolerite in <i>Allocasuarina</i> (sheoak) forest in the north and east of the State. No suitable habitat in the proposal area.
<i>Haloragis heterophylla</i> variable raspwort	Rare/ -	NONE	<i>Haloragis heterophylla</i> occurs in poorly-drained sites (sometimes only marginally so), which are often associated with grasslands and grassy woodlands with a high component of <i>Themeda triandra</i> (kangaroo grass). It also occurs in grassy/sedgy <i>Eucalyptus ovata</i> forest and woodland, shrubby creek lines, and broad sedgy/grassy flats, wet pasture and margins of farm dams. No suitable habitat in the proposal area.
<i>Hovea tasmanica</i> rockfield purplepea	Rare/ -	VERY LOW	<i>Hovea tasmanica</i> occurs in central and north-eastern regions. It is usually found on dry, rocky ridges or slopes (mostly dolerite) in forest and riverine scrub. Limited habitat on site. A distinctive species that is highly unlikely to have been overlooked.
<i>Juncus amabilis</i> gentle rush	Rare/ -	VERY LOW	<i>Juncus amabilis</i> occurs in a variety of habitats, usually poorly-drained sites such as damp grasslands and grassy woodlands, wet pastures, roadside ditches and edges of still and slow-flowing waterbodies. As presently understood, the species is mainly confined to lowland areas in the eastern half of the State but there are potential higher elevation and more western records that require confirmation. There is limited habitat for this species in the proposal area. It is also a distinctive <i>Juncus</i> and is unlikely to have been overlooked.
<i>Lachnagrostis punicea</i> subsp. <i>punicea</i>	Rare/ -	NONE	<i>Lachnagrostis punicea</i> subsp. <i>punicea</i> (both subspecies) occurs in moist depressions in grassy woodlands/forests and grasslands, and on the edges of swamps and saline flats. No suitable habitat in the proposal area.

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
bristle blowgrass			
<i>Lepidium hyssopifolium</i> soft peppergrass	endangered/ ENDANGERED	NONE	The native habitat of <i>Lepidium hyssopifolium</i> is the growth suppression zone beneath large trees in grassy woodlands and grasslands (e.g. over-mature black wattles and isolated eucalypts in rough pasture). <i>Lepidium hyssopifolium</i> is now found primarily under large exotic trees on roadsides and home yards on farms. It occurs in the eastern part of Tasmania between sea-level to 500 metres above sea level in dry, warm and fertile areas on flat ground on weakly acid to alkaline soils derived from a range of rock types. It can also occur on frequently slashed grassy/weedy roadside verges where shade trees are absent. No records within 5km. The proposal area is unsuitable for this species.
<i>Lycopus australis</i> australian gypsywort	Endangered/ -	VERY LOW	<i>Lycopus australis</i> occurs in moist shaded places including disturbed areas within <i>Melaleuca ericifolia</i> swamp forest, <i>Phragmites australis</i> reed beds, and rocky (dolerite) riverbeds fringed by riparian scrub. There are however few records of this species in Tasmania; it is a distinctive species and given the small area of suitable habitat it is unlikely that it was overlooked.
<i>Lythrum salicaria</i> purple loosestrife	Vulnerable/ -	VERY LOW	<i>Lythrum salicaria</i> inhabits swamps, stream banks and rivers mainly in the north and north-east of the State. It can also occur between gaps in <i>Melaleuca ericifolia</i> forest. This species can act as a weed, proliferating along roadsides and other disturbed areas, and, as horticultural strains are in cultivation and birds can disperse seed, some occurrences may not be native. It is a distinctive species and given the small area of suitable habitat it is unlikely that it was overlooked.
<i>Mentha australis</i> river mint	Endangered/ -	NONE	<i>Mentha australis</i> is known from riparian habitats along the lower reaches of the South Esk River, Lake Trevallyn and the Rubicon River, where it occurs along the rocky (dolerite) margins of rivers and lakes. There is no suitable habitat in the proposal area.
<i>Muehlenbeckia axillaris</i> matted lignum	Rare/ -	NONE	<i>Muehlenbeckia axillaris</i> is predominantly found in moist gravelly or rocky places on the Central Plateau, extending out to the west, north-west and lower reaches of the South Esk River. No suitable habitat in the proposal area.
<i>Myriophyllum integrifolium</i>	Vulnerable/ -	NONE	<i>Myriophyllum integrifolium</i> occurs mostly in the Northern Midlands, with isolated populations in the State's north, north-east and south. It grows at the margins of

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
tiny watermilfoil			wetlands and in seasonally wet places, including depressions associated with small ephemeral lakes. It can occur in coastal heathland and in forest in the Midlands, where it is often associated with old muddy tracks. No suitable habitat in the proposal area.
<i>Parietaria debilis</i> shade pellitory	Rare/ -	NONE	<i>Parietaria debilis</i> occurs around muttonbird rookeries, on cliffs/rocks in the salt spray zone, in moist shaded areas in dune scrubs, and under rock overhangs in forested gullies. No suitable habitat in the proposal area.
<i>Persicaria decipiens</i> slender waterpepper	Vulnerable/ -	VERY LOW	<i>Persicaria decipiens</i> occurs on the banks of rivers and streams, mostly in the north of the State, including King Island. The species may colonise farm dams. It is a distinctive species and given the limited suitable habitat it is unlikely that it was overlooked.
<i>Persicaria subsessilis</i> bristly waterpepper	Endangered/ -	VERY LOW	<i>Persicaria subsessilis</i> occurs in Launceston and on the Ringarooma River in rocky (dolerite) river margins, where it co-occurs with the more frequent <i>Persicaria hydropiper</i> (green waterpepper); disturbed <i>Melaleuca ericifolia</i> (coast paperbark) swamp forest and lagoon margins; <i>Cyperus lucidus</i> (leafy flatsedge) sedgeland with the allied <i>Persicaria praetermissa</i> (arrow waterpepper) prominent; and within openings in riparian scrub on alluvium. Habitat in the proposal area was sub optimal and this species is unlikely to have been overlooked.
<i>Phyllangium divergens</i> wiry mitrewort	Vulnerable/ -	NONE	<i>Phyllangium divergens</i> occurs in a wide variety of near-coastal habitats on a range of substrates, a common feature usually being bare ground (e.g. tracks) and rock exposures (e.g. outcrops, coastal cliffs, etc.). The site is not near the coast.
<i>Prostanthera rotundifolia</i> roundleaf mintbush	Vulnerable/ -	NONE	<i>Prostanthera rotundifolia</i> mainly occurs along flood-prone rocky riverbeds as a component of the dense riparian shrubbery but also extends to adjacent rocky slopes. Habitat in the proposal area is largely unsuitable – this is also a large and distinctive species that is highly unlikely to have been overlooked.
<i>Pterostylis commutata</i> midlands greenhood	endangered/ CRITICALLY ENDANGERED	NONE	No records within 5 km. <i>Pterostylis commutata</i> is restricted to Tasmania's Midlands, where it occurs in native grassland and <i>Eucalyptus pauciflora</i> grassy woodland on well-drained sandy soils and basalt loams. No suitable habitat in the proposal area.
<i>Pterostylis ziegelerei</i> grassland greenhood	vulnerable/ VULNERABLE	NONE	No records within 5 km. <i>Pterostylis ziegelerei</i> is restricted to the east and north of Tasmania. In coastal areas, the species occurs on the slopes of low stabilised sand dunes and in grassy dune swales, while in the Midlands it grows in native grassland or

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
			grassy woodland on well-drained clay loams derived from basalt. No suitable habitat in the proposal area.
<i>Ranunculus pumilio</i> var. <i>pumilio</i> ferry buttercup	Rare/ -	VERY LOW	<i>Ranunculus pumilio</i> var. <i>pumilio</i> occurs mostly in wet places (e.g. broad floodplains of permanent creeks, "wet pastures") from sea level to altitudes of 800-900 m above sea level. Limited potential due to the dense sward of sedges in the riparian habitat that reduces the chances of this species occurring.
<i>Rumex bidens</i> mud dock	R (V Pending)/ -	NONE	<i>Rumex bidens</i> grows at the margins of lakes, swamps, and slow-moving rivers and streams, and may also occur in drainage channels. No suitable habitat in the proposal area.
<i>Schoenoplectus tabernaemontani</i> river clubsedge	Rare/ -	NONE	<i>Schoenoplectus tabernaemontani</i> inhabits the margins of lagoons on King Island, Flinders Island and on some riverbanks in the Midlands. No suitable habitat in the proposal area.
<i>Scutellaria humilis</i> dwarf scullcap	Rare/ -	NONE	<i>Scutellaria humilis</i> is found in moist, shady places in the north-east and south-east of the State. Recent sites have been associated with rocky slopes and rises. No suitable habitat in the proposal area.
<i>Senecio campylocarpus</i> bulging fireweed	- (V Pending)/ -	NONE	<i>Senecio campylocarpus</i> occurs on grassy margins of permanent rivers in the Midlands and on broad floodplains. No suitable habitat in the proposal area.
<i>Senecio psilocarpus</i> swamp fireweed	Endangered/ ENDANGERED	NONE	<i>Senecio psilocarpus</i> is known from six widely scattered sites in the northern half of the State, including King and Flinders islands. It occurs in swampy habitats including broad valley floors associated with rivers, edges of farm dams amongst low-lying grazing/cropping ground, herb-rich native grassland in a broad swale between stable sand dunes, adjacent to wetlands in native grassland, herbaceous marshland and low-lying lagoon systems. No suitable habitat in the proposal area.
<i>Siloxerus multiflorus</i> small wrinklewort	Rare/ -	NONE	<i>Siloxerus multiflorus</i> occurs in a range of somewhat exposed lowland habitats, including bare soil and rocks amongst dense windswept coastal shrubbery to rock outcrops and bare ground associated with native grassland, grassy woodland and forest. No suitable habitat for this species.

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
<i>Spyridium eriocephalum</i> var. <i>eriocephalum</i> heath dustymiller	Endangered/ -	NONE	In Tasmania, <i>Spyridium eriocephalum</i> var. <i>eriocephalum</i> known to be extant at a single subpopulation within East Risdon State Reserve. This is an erroneous record from the 1800's.
<i>Spyridium vexilliferum</i> var. <i>vexilliferum</i> helicopter bush	Rare/ -	NONE	<i>Spyridium vexilliferum</i> occurs in a range of vegetation types, including sandy heaths, rock plates and dry sclerophyll forest and woodland (mainly dominated by <i>Eucalyptus amygdalina</i> ). It is found on a range of substrates (e.g. mudstone, granite, laterite gravels) from near-coastal areas in the east, north and west of the State, to the Midlands and lower Derwent Valley. It is most abundant in open or disturbed areas, as it can proliferate from soil-stored seed after disturbance. No suitable habitat in the proposal area.
<i>Styloidium despectum</i> small triggerplant	Rare/ -	NONE	<i>Styloidium despectum</i> has mainly been recorded from wet sandy heaths, moist depressions, soaks and hollows in near-coastal areas. It extends to similar habitat amongst forest and woodland in the Midlands. No suitable habitat in the proposal area.
<i>Teucrium corymbosum</i> forest germander	Rare/ -	VERY LOW	<i>Teucrium corymbosum</i> occurs in a wide range of habitats from rocky steep slopes in dry sclerophyll forest and <i>Allocasuarina</i> (sheoak) woodland, riparian flats and forest. Habitat in the proposal area is sub optimal for this species; it is also a distinctive species that is unlikely to have been overlooked.
<i>Triptilodiscus pygmaeus</i> dwarf sunray	Vulnerable/ -	NONE	<i>Triptilodiscus pygmaeus</i> grows within grasslands, grassy woodlands or rockplates, with the underlying substrate being mostly Tertiary basalt or Jurassic dolerite. The elevation range of recorded sites in Tasmania is 30-470 m above sea level, with an annual rainfall of about 450-600 mm. The species occurs within native grassland dominated by <i>Themeda triandra</i> (kangaroo grass). No suitable habitat.
<i>Utricularia australis</i> yellow bladderwort	Rare/ -	NONE	<i>Utricularia australis</i> has a widespread distribution, ranging from the Gordon River in the south-west to the northern part of Flinders Island in the far north-east (and also reportedly from the Derwent River in the State's south). It grows in stationary or slow-moving water, including natural lakes, farm dams and reservoirs, where it has been reported as forming 'locally dense swards'. No suitable habitat.

Species	Status TSPA / EPBCA	Potential to occur in proposal area	Observations and preferred habitat <sup>23</sup>
<i>Velleia paradoxa</i> spur velleia	Vulnerable/ -	VERY LOW	<i>Velleia paradoxa</i> is known from the Hobart and Launceston areas, and the Midlands and the Derwent Valley, where it occurs in grassy woodlands or grasslands on dry sites. It has been recorded up to 550 m above sea level at sites with an annual rainfall range of 450-750 mm. This is the northern extreme of the species in Tasmania with very few records this far north. Highly unlikely to occur.
<i>Veronica plebeia</i> trailing speedwell	Rare/ -	LOW	<i>Veronica plebeia</i> typically occurs in dry to damp sclerophyll forest dominated by <i>Eucalyptus amygdalina</i> on dolerite or Tertiary sediments but can also occur in <i>Eucalyptus ovata</i> grassy woodland/forest and <i>Melaleuca ericifolia</i> swamp forest. Possible, but only the similar <i>V. calycina</i> was recorded and it is not expected this species was overlooked.
<i>Viola caleyana</i> swamp violet	Rare/ -	VERY LOW	The habitat of <i>Viola caleyana</i> in Tasmania is poorly understood but includes lowland wet grasslands, possibly wet heathlands and a variety of forest types. There are very few records of this species in Tasmania, and it is unlikely to have been overlooked.
<i>Xerochrysum bicolor</i> eastcoast everlasting	Rare/ -	NONE	Species of <i>Xerochrysum</i> are poorly understood in Tasmania, especially the identification of coastal species ( <i>X. bicolor</i> and <i>X. bracteatum</i> ). <i>X. bicolor</i> may be restricted to stabilised dune systems. No suitable habitat in the proposal area.

### 3.3 Threatened fauna and threatened fauna habitat

During the surveys no sightings or signs (e.g. scats, prints, nests) of any listed threatened fauna were recorded. However, habitat for threatened fauna is present on the site, and in 2019 an eagle nest was found by an observer (see below).

A summary of the findings and considerations for each of the species likely to occur is presented below. Additionally, in Table 2, all species recorded within a 5 km radius (or considered likely to have potential habitat), as identified in the Natural Values Atlas and EPBC Protected Matters Search Tool reports, are discussed<sup>24</sup>. Coastal, marine, cave-dwelling and wetland species (e.g. Australasian bittern, eastern curlew) are excluded as they have no chance of occurring in the proposal area.

Further background and supporting information on the threatened species that have some potential to occur is provided in the addendum report<sup>25</sup> and the Statement of Evidence<sup>26</sup>.

#### Tasmanian wedge-tailed eagle

In 2019, a Tasmanian wedge-tailed eagle's nest was reported on the property, this was verified by two observers from NBES in November 2019 (Figure 3 above, Plate 5). The nest is about 220 m from the nearest residential lot and 190 m from Ecclestone Road. The nest was visited during the breeding season in 2019 and in August 2021; on both occasions no activity was apparent. Given the suboptimal characteristics of the location, tree and nest itself it is quite possible the nest will not be used for breeding. The species may forage in the area on occasion but the relatively closed nature of the forest across much of the proposal area is sub-optimal for this species.

#### Tasmanian masked owl

In the July 2018 survey, a tree hollow potentially suitable for masked owl<sup>27</sup> was recorded in a large *Eucalyptus viminalis* (DBH 170 cm) in the southeast of the proposal area (and outside the impact area, Plate 6). Subsequently, the site was visited by an NBES ecologist with one of the representors who shared her knowledge of the location of trees with hollows potentially suitable for masked owl. During this search, ten additional trees were noted as having potential hollows suitable for masked owl, but further analysis of these trees reduced the number of potential trees to six trees (Plate 7, Figure 3 above). No evidence of birds utilising these hollows (e.g. whitewash, regurgitated pellets etc.) was recorded. Targeted masked owl surveys in August 2021, including a songmeter survey, did not detect masked owl.

#### Tasmanian devil

Recorded in 2019 in the north west of the proposal area and on the nearby boundary (neither record by NBES). There are additional less recent records from the broader area. It is expected that that the species forages in the proposal area.

In the 2018 survey a search for potential burrows and dens for Tasmanian devil was included in the survey. It was recorded in the north west of the proposal area by one of the appellants and on the nearby boundary. No suitable breeding sites were located for this species, but it should be noted that locating breeding sites for these species is typically challenging, and even if potential denning sites are located, breeding sites may still remain undetected. Subsequent targeted surveying applying the DPIPWE protocol for denning habitat was

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<sup>24</sup> DPIPWE Natural Values Atlas Report, nvr\_4\_02-Dec-2020, Commonwealth of Australia, EPBC Protected Matters Search Tool Report, 2018 (report PMST\_WMVSBO)

<sup>25</sup> NBES (2020a)

<sup>26</sup> Barker (2022)

<sup>27</sup> Forest Practices Authority 2016

undertaken in August 2021<sup>28</sup>. Structures that may offer opportunities for dens, including burrows, rocky caverns, upturned root plates and similar were not found. It is possible that they occur in the dense vegetation near the creek line in the south east on the balance lot or elsewhere in the surrounding area. The habitat is suitable for hunting and the site may form part of a home range.

### **Spotted-tailed quoll**

Suitable foraging habitat for the quoll is widespread on the site. One representation against the proposal claimed to observe a footprint. It cannot be known if the footprint was that of a male or female. If the site is within the core of a female home range the den opportunity is most likely to be on the balance lot rather than in the open forest of the residential proposal due to the presence of higher protective cover provided by dense vegetation on the balance lot. If it is not within a female home range, male quolls remain likely to traverse the site from time to time.

### **Eastern quoll**

Suitable foraging habitat for the quoll is widespread on the site. No scats or tracks were located but suitable habitat is widespread in proposal area and it is possible this species occurs. Denning requirements for eastern quoll are typically less than for devils and it is possible that this species utilises the proposal area for breeding.

### **Eastern barred bandicoot**

Although no sign of eastern barred bandicoot was detected during the surveys, it has been recorded on the neighbouring property. The habitat on the site is suitable: the open grassy understory and adjacent periurban gardens are ideal habitat for foraging. The bandicoot could potentially nest on adjacent lots and in parts patches of dense ground cover on this site are ideal for nesting. Consequently, is likely that the bandicoot nests on the site and it is assumed to be present but likely in low numbers.

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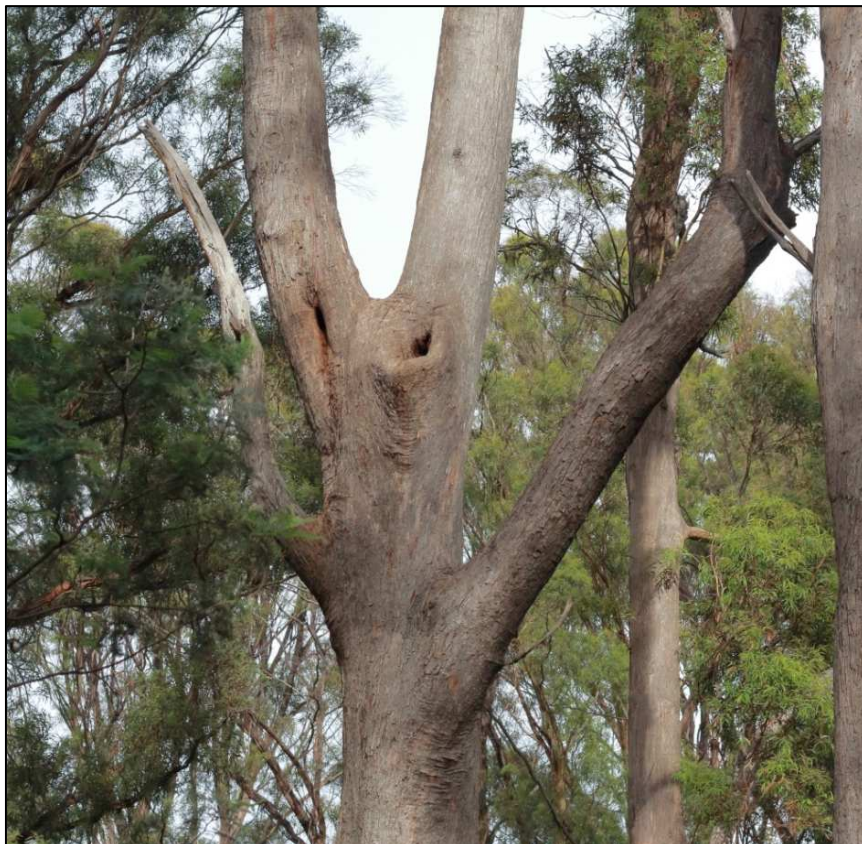
<sup>28</sup> Natural and Cultural Heritage Division (2015)



**Plate 5: Tasmanian wedge-tailed eagle nest in the south east of the proposal area**



**Plate 6: tree hollow in *Eucalyptus viminalis* potentially suitable for Tasmanian masked owl in proposal area**



**Plate 7: tree hollow in *Eucalyptus amygdalina* potentially suitable for Tasmanian masked owl in proposal area**

**Table 1: Fauna species of conservation significance previously recorded, or which may potentially occur, within 5 km of the proposal area<sup>29</sup>**

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
<b>BIRDS</b>			
azure kingfisher <i>Alcedo azurea</i> ssp. <i>diemenensis</i> ( <i>Ceyx</i> <i>azureus</i> ssp. <i>diemenensis</i> )	Endangered/ ENDANGERED	NONE	The Tasmanian subspecies of the azure kingfisher occurs in shady and overhanging forest vegetation along the forested margins of major rivers on the south, west, north and northwest coasts. It catches prey by plunging from perches overhanging the water. It feeds on small fish, freshwater crayfish, aquatic insects, and occasionally frogs. The main threat to the species is clearing and modification of river-side vegetation. No suitable habitat in the proposal area.  Not recorded within 5 km of the proposal area. The watercourses in the proposal area are not sufficient to offer foraging or nesting habitat for this species.
grey goshawk <i>Accipiter</i> <i>novaehollandiae</i>	Endangered/-	LOW	Recorded within 500 m of the proposal area. Nesting habitat potential in the proposal area is very low (no category 1 or 2 habitat <sup>32</sup> ). The species may forage in the area on occasion but the relatively closed nature of the forest across much of the proposal area is sub-optimal for this species.
wedge-tailed eagle <i>Aquila audax fleayi</i>	Endangered/ ENDANGERED	NEST PRESENT	Since the June and November 2018 surveys, a nest of this species was recorded in the balance of the proposal area. Given the freshness of the material and the lack of compression, the nest appeared relatively new; in November 2019 was aged at between a few months and a year, two at the most (pers. comm. Bill Brown and Jason Wiersma). The nest was visited during the breeding season in 2019, and in August 2021; on both occasions no activity was apparent which is usually evident by the presence of whitewash, remnants of prey fallen to the ground and the establishment of a substantial recently renovated nest platform.

<sup>29</sup> DPIWE Natural Values Atlas Report, nvr\_4\_02-Dec-2020, Commonwealth of Australia, EPBC Protected Matters Search Tool Report, 2018 (report PMST\_WMVSBO)

<sup>30</sup> National - Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* including JAMBA, CAMBA and Migratory species; State - Tasmanian *Threatened Species Protection Act, 1995*.

<sup>31</sup> Bryant & Jackson 1999;

<sup>32</sup> Forest Practices Authority 2011

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
			The site is largely sub-optimal for nesting trees and the nest tree itself is relatively small for this species (~70 cm DBH). Although birds have been seen near the nest, there is no evidence that it has been used successfully for breeding. Given the relatively exposed location of the tree, the relatively small size of the tree and supporting boughs, and the nest structure itself, it is quite possible this nest will not be used for breeding. The species may forage in the area on occasion but the relatively closed nature of the forest across much of the proposal area is sub-optimal for this species.
white-bellied sea-eagle <i>Haliaeetus leucogaster</i>	Vulnerable/ MIGRATORY	NONE	Occurs in coastal habitats and large inland waterways. No nests belonging to this species were observed in the proposal area. Forages in coastal and wetland environments and not likely to occur in the proposal area.
swift parrot <i>Lathamus discolor</i>	Endangered/ ENDANGERED	VERY LOW	Recorded within 500 m of the proposal area. The proposal area is not within the core range of this species. Also, this species' preferred foraging habitat tree - blue gum ( <i>Eucalyptus globulus</i> ) - is not present, and black gum ( <i>Eucalyptus ovata</i> ) – another foraging tree - is very sparse in a small area in the proposal area. Breeding is not known from the area and based on the lack of observations highly unlikely to occur.
masked owl <i>Tyto novaehollandiae castanops</i>	Endangered/ VULNERABLE	LOW / MODERATE	Recorded within 500 m of the proposal area. Requires a mosaic of forest and open areas for foraging and large old-growth hollow-bearing trees for nesting. This species has a territory of ~2000 ha and this site may form part of a territory. No birds were detected during surveys, including targeted surveys in 2021. Six potentially suitable nesting trees occur on the site on the bird and may hunt in proposal area.
fork-tailed swift <i>Apus pacificus</i>	-/MIGRATORY	None	This species is predicted to occur in the area by habitat mapping only. Most records of the Fork-tailed swift are from Bass Strait Islands with fewer on mainland northern Tasmania. Almost exclusively an aerial species, with no likelihood of roosting in the proposal area.

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
white-throated needletail <i>Hirundapus caudacutus</i>	-/MIGRATORY	None	This species is infrequently recorded in Tasmania and although it may sporadically occur over the area it is an aerial feeder and the impact on this species is considered negligible.
satin flycatcher <i>Myiagra cyanoleuca</i>	-/MIGRATORY	LOW	A summer migrant that is widespread in Tasmanian forested habitats. Is sensitive to fragmentation and canopy thinning. Optimal habitat is considered to contain old growth elements and occur along water courses, but the species is not entirely absent from habitats lacking these features.  May occur in the general area at low frequency. Highly unlikely to be meaningfully impacted by a proposal of this nature.
Japanese snipe <i>Gallinago hardwickii</i>	-/MIGRATORY	NONE	This species is predicted to occur in the area by habitat mapping only. Typical habitat is the low vegetation around wetlands. Habitat in the proposal area is entirely unsuitable for this species.
great egret <i>Ardea alba</i>	-/MIGRATORY	NONE	This species is predicted to occur in the area by habitat mapping only. A non-breeding wetland species with no habitat on site.
cattle egret <i>Ardea ibis</i>	-/MIGRATORY	NONE	This species is predicted to occur in the area by habitat mapping only. A cosmopolitan species that self-colonised Tasmania in the 1960's and migrates annually for the non-breeding season. It is infrequent, and often recorded foraging in pasture. No habitat on site.
<b>MAMMALS</b>			

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
Tasmanian devil <i>Sarcophilus harrisii</i>	Vulnerable/ VULNERABLE	MODERATE	Recorded in 2019 in the north west of the proposal area and on the nearby boundary (neither by NBES). There are additional less recent records from the broader area. It is expected that that the species forages in the proposal area. No suitable denning structures were observed. Suitable denning habitat is having 'one or a combination of burrowable well-drained soil, sheltered overhangs such as cliffs, rocky outcrops, knolls, caves and earth banks, and log piles with at least one entrance through which a devil could pass' <sup>33</sup> . In this regard, the only quality observed in the proposal area is burrowable well-drained soil. In areas of denser vegetation near the creek (in the balance area not planned for development) more suitable denning habitat may be present. As stated in the addendum <sup>34</sup> and Statement of Evidence <sup>35</sup> , it is equally possible that devils the utilise the land are denning on other properties within their home range either in natural or artificial den opportunities, including under sheds, old wood piles and the like. Nevertheless, it is possible the species breeds in the proposal area. More detail is provided in the addendum <sup>36</sup> and Statement of Evidence <sup>37</sup> .
eastern quoll <i>Dasyurus viverrinus</i>	-/ ENDANGERED	MODERATE to HIGH	There are several records within 5 km. No scats or tracks were located but suitable habitat is widespread in proposal area and it is possible this species occurs. Denning requirements for eastern quoll are typically less than for devils and it is possible that this species utilises the proposal area for breeding. More detail is provided in the addendum. <sup>38</sup>
spotted-tailed quoll <i>Dasyurus maculatus</i>	Rare/ VULNERABLE	MODERATE	There are several records within 5 km. No scats or tracks were located but suitable habitat is present especially in the densely vegetated areas near the creek. One of the representors (an experienced biologist) noted a track of this species on the property

<sup>33</sup> Natural and Cultural Heritage Division 2015

<sup>34</sup> NBES (2020a)

<sup>35</sup> Barker (2022)

<sup>36</sup> NBES (2020a)

<sup>37</sup> Barker (2022)

<sup>38</sup> NBES (2020a)

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
			boundary. Denning requirements for quolls are typically less than for devils with potential breeding habitat described as <i>structurally complex (high canopy, with dense understorey and ground vegetation cover) forest</i> <sup>39</sup> . It is possible that this species utilises the proposal area for breeding. More detail is provided in the addendum <sup>40</sup> and Statement of Evidence <sup>41</sup> .
eastern barred-bandicoot <i>Perameles gunnii</i>	-/VULNERABLE	PRESENT Likely to breed	Recorded in 2019 in the north west of the proposal area and on the nearby boundary (neither by NBES). Grassy habitat is patchy and widespread in the proposal area and sufficient cover is present for this species to breed in the proposal area. More detail is provided in the addendum <sup>42</sup> and Statement of Evidence <sup>43</sup> .
<b>REPTILES</b>			
tussock skink <i>Pseudemoia pagenstecheri</i>	Vulnerable/-	NONE	Inhabits tussock grasslands. No suitable habitat in the proposal area.
<b>INVERTEBRATES</b>			
green-lined ground beetle <i>Catadromus lacordairei</i>	Vulnerable/-	NONE	The species occurs in open grassy woodland associated with wetlands at low elevations. No suitable habitat.
Mount Arthur burrowing crayfish <i>Engaeus orramakunna</i>	Vulnerable/ VULNERABLE	NONE	Not recorded within 5 km of the proposal area, and the catchment range for this species is not near the proposal area.

<sup>39</sup>Forest Practices Authority 2014

<sup>40</sup> North Barker Ecosystem Services 2020a

<sup>41</sup> Barker (2022)

<sup>42</sup> North Barker Ecosystem Services 2020a

<sup>43</sup> Barker (2022)

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
<p>chaostola skipper <i>Antipodia chaostola leucophaea</i></p>	<p>Endangered/ ENDANGERED</p>	<p>LOW</p>	<p>No records within 5 km. The core range of the chaostola skipper is a 3 km (radius) buffer centred on the known sites<sup>44</sup> - there are no known sites near the proposal area, so this is not part of the core range of this species. <i>Gahnia radula</i> (the larval host plant for this species) is common in places on the site, often forming dense swards; there is therefore potential habitat for this species<sup>45</sup>. Notably, areas west of the Tamar but nearer the coast were surveyed in 2017 to better understand the state-wide distribution of the species; these surveys did not record the skipper<sup>46</sup>. Also, the host plant species is a relatively common understorey plant that has a much broader distribution than the skipper across Tasmania. So, although the possibility of additional surveying was raised in the addendum, we conclude that the potential for this species to occur is low and that dedicated surveys are not warranted.</p>
<p>snail (Cataract Gorge) <i>Pasmaditta jungermanniae</i></p>	<p>Rare/-</p>	<p>NONE</p>	<p>Known only from the Cataract Gorge and nearby locations.</p>
<p>spider (Cataract Gorge) <i>Migas plomleyi</i></p>	<p>Rare/-</p>	<p>NONE</p>	<p>Only know from the slopes surrounding Cataract Gorge, near Launceston. Inhabits burrows in moss covering boulders and in crevices in open bushland.</p>
<b>AMPHIBIANS</b>			
<p>green and golden frog <i>Litoria raniformis</i></p>	<p>Vulnerable/ VULNERABLE</p>	<p>VERY LOW</p>	<p>Recorded within 500 m of the proposal area. Requires shallow standing water. It is conceivable that the frog occurs from time to time in association with the creek in the south east but this is considered highly unlikely because it is a basking frog that prefers</p>

<sup>44</sup> Bell, PJ 2017

<sup>45</sup> Bell, PJ 2017

<sup>46</sup> Bell, PJ 2017

Species	Status <sup>30</sup> TSPA/EPBCA	Potential for breeding to occur	Observations and preferred habitat <sup>31</sup>
			open water and open ground. Frogs do migrate from suitable habitat in wet years but generally only colonise similar core habitats.
striped marsh frog <i>Limnodynastes peroni</i>	Endangered / VULNERABLE	NONE	No suitable habitat in the proposal area.
<b>FISH</b>			
eastern dwarf galaxias <i>Galaxiella pusilla</i>	Vulnerable/ VULNERABLE	NONE	Lives in still or slow-flowing waters such as ponds, swamps, drains and backwaters of streams, often containing dense aquatic or emergent plants. No suitable habitat present.
swan galaxias <i>Galaxias fontanus</i>	Endangered /ENDANGERED	NONE	Found only in the Swan River and Macquarie River catchments of eastern Tasmania.
australian grayling <i>Prototroctes maraena</i>	Vulnerable/ VULNERABLE	NONE	Occurs in unpolluted streams with large pools and major rivers. No suitable habitat.

### 3.4 Declared weeds

Three species of declared weeds occur in the proposal area: slender thistle (*Carduus pycnocephalus*), blackberry (*Rubus fruticosus*, Plate 8) and gorse (*Ulex europaeus*, Plate 9). Slender thistle occurs as an infestation in one area; blackberry has invaded areas along the southern boundary; and there is a single occurrence of gorse (Figure 4).



**Plate 8: blackberry infestation on the fenceline in the south of the proposal area**



**Plate 9: gorse in the proposal area**

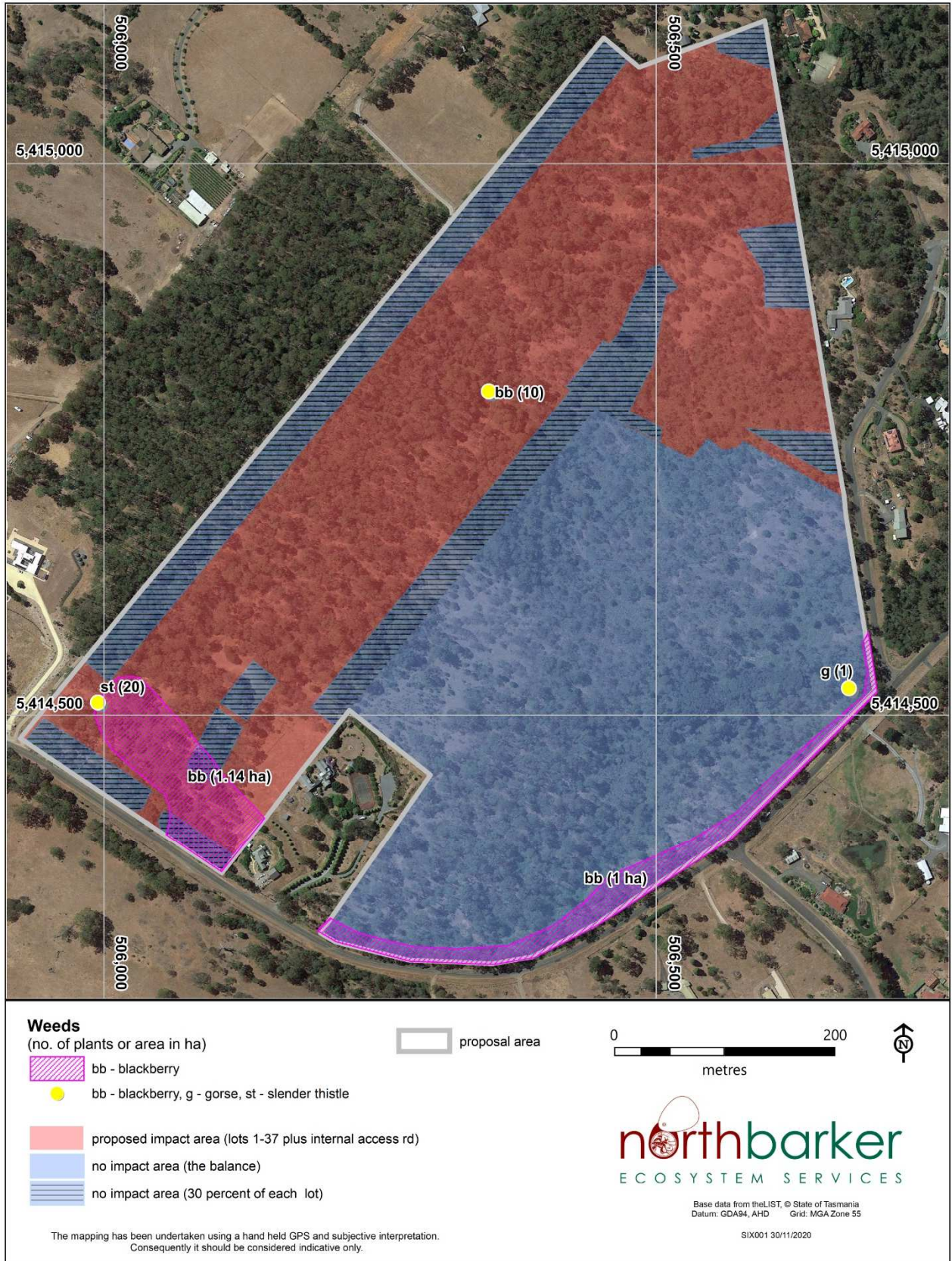


Figure 4: map of the declared weeds in the proposal area

## 4 Assessment of impact and mitigation

Mitigation measures have been included in previous versions of this report. Such measures are typically realised as conditions on development in the planning permit issued to the proponent. In this case, the permit for the Ecclestone Road subdivision has been issued and includes conditions on development informed by recommendations in previous versions of this NVA, the addendum, and the tribunal process. Accordingly, mitigation measures are not included in any detail in this updated report and the permit conditions in the amended permit (issued 23 December 2021)<sup>47</sup> should be referred to for details in this regard.

### 4.1 Vegetation

While the entire property was surveyed, only the western side will be developed for the 37 lots and access road. The sum of impact for the clearance of vegetation for building and for bushfire hazard management is 15.9 ha (43% of the project area). Notably, at least 92 % of the balance, and 20 - 30% of each of the lots will not be developed and protected as a 'Natural Values Protection Area' under Part 5 agreements (a total of 20.9 ha or 57 % of the project area)<sup>48</sup>.

None of the DOV or the DVG will be developed; this includes riparian vegetation that is present along the unnamed creek that flows from the site. Vegetation clearance and or fuel modification is limited to 11.8 and 4.1 ha of the DAD and NBA vegetation communities, respectively. Accordingly, 11.6 and 7.2 ha of the DAD and NBA will be protected, respectively.

Neither the DAD or the NBA are protected under any Act, but both are under-reserved in the state and bioregion.

### 4.2 Threatened flora

Fifty plants of *Brunonia australis* occur in the bushfire hazard management areas of the western residential lots. Of these, 48 are within the bushfire hazard management areas of 3 lots. Because the plant does not generally exceed 100 mm it will not be removed in fuel managed areas. The flowers can be protected from managing fuel in October or leaving the clumps of unmanaged during the flowering season. However, this is not stipulated as a permit condition, although under condition 4 an updated survey for *Brunonia* must be undertaken prior to any clearance of vegetation<sup>49</sup>. Additionally, under the TSPA, a 'permit to take' will be required for impact to any number of this species.

*Poa mollis* was not recorded during any of the NBES surveys and although there are records from the NVA in the proposal area, we are unable to confirm its presence in the proposal area and no impact to this species is expected. Additionally, none of the three NVA record locations are in the proposed impact area, however one of the records is near the bushfire hazard management area in one of the lots. Regardless, under permit condition 4, an updated survey for *Poa mollis* must be undertaken prior to any clearance of vegetation<sup>50</sup>.

### 4.3 Threatened fauna and threatened fauna habitat

Tasmanian devil, eastern barred bandicoot and a Tasmanian wedge-tailed eagle nest have all been recorded in the proposal area since the NBES surveys in 2018. Although no presence or sign of quolls or Tasmanian masked owl were recorded during the 2018 surveys, spotted-tailed quoll prints were reported from the boundary of the property by one of the representors

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<sup>47</sup>West Tamar Council (2021)

<sup>48</sup> West Tamar Council (2021)

<sup>49</sup> West Tamar Council (2021)

<sup>50</sup> West Tamar Council (2021)

in 2019, and foraging and potential breeding habitat for these species is present in the proposal area.

### **Tasmanian wedge-tailed eagle**

A wedge-tailed eagles' nest was recorded in the proposal area after the initial natural values surveys were conducted. The nest was visited (from the ground only) during the breeding season in 2019 and in August 2021 and there was no indication the nest was being used. Given the relatively exposed location of the tree, the relatively small size of the tree and supporting boughs, and the nest structure itself, it is quite possible this nest will never be used for breeding.

The nest is about 220 m from the nearest occupied residential lot on an adjacent title and 190 m from Ecclestone Road. The proposal would result in the nest being ~220 m the nearest new residence. The nest will be no closer than it is now to existing development, but the density of the proposed development will be higher than existing development<sup>51</sup>.

20 ha of the 34 ha of habitat on the whole of the site will be retained. The majority of the retained habitat will be on the balance lot where the nest tree is located. The retention of 90% of the habitat on the balance lot provides a relatively high degree of protection given it surrounds the nest and the development comes no closer than existing development<sup>52</sup>.

If the nest is shown to be active, potential risk of impact during breeding can be managed by avoiding construction and vegetation clearance during the breeding season (July to January/February inclusive) within 500 m of the nest site<sup>53</sup>.

Permit conditions stipulate a pre-clearance survey of the nest and restrictions on the clearance and construction period should the nest be found to be active<sup>54</sup>.

### **Tasmanian masked owl**

The site is suitable for masked owl and six trees with hollows potentially suitable for masked owl were recorded in the proposal area. Of these, one is in the proposed development area. Given the relatively large territorial range of the species (~2000 ha), the removal of ~15.9 ha of potential forage habitat and 1 potential nest tree will not have a significant impact on this species.

Permit conditions stipulate a pre-clearance survey of suitable hollows that may be impacted, and subsequent management of the hollow should it found to be in use by a masked owl<sup>55</sup>.

### **Tasmanian devil**

Tasmanian devil has been recorded in the proposed impact area. No dens were located during the surveys and as such no impact on dens is anticipated. Regardless, it is best practice to undertake additional den searches prior to the beginning of land clearance works to confirm the continuing absence of dens because dens may be established in the intervening period<sup>56</sup>. Permit conditions stipulate a pre-clearance survey for dens and processes to follow should potential dens be found<sup>57</sup>.

The size of the proposed impact area is considerably less than a typical home range for this species (healthy populations has been recorded at 1.3 animals per km<sup>2</sup>)<sup>58</sup> and while density

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<sup>51</sup> Barker (2022)

<sup>52</sup> Barker (2022)

<sup>53</sup> Forest Practices Authority 2015

<sup>54</sup> West Tamar Council (2021)

<sup>55</sup> West Tamar Council (2021)

<sup>56</sup> Barker (2022)

<sup>57</sup> West Tamar Council (2021)

<sup>58</sup> Lazenby 2018

may exceed this in optimum habitat, the impact to this wide-ranging species by the removal of potential habitat by the current development is not expected to be significant.

The retention of 21 ha of the 37 ha site with the majority of the 21 ha to be protected being in a continuous area, will significantly mitigate the impact of the proposal on native foraging habitat.

### **Spotted-tailed quoll**

No dens were located and as such no impact on dens is anticipated. For this species the same survey effort and mitigation as for the Tasmanian devil will be employed. Additional den searches prior to the beginning of land clearance works to confirm the continuing absence of dens because dens may be established in the intervening period<sup>59</sup>. Permit conditions stipulate a pre-clearance survey for dens and processes to follow should potential dens be found<sup>60</sup>.

The loss of potential habitat by the current proposal could conceivably reduce the carrying capacity in the local area for this species. It is unknown exactly how many quolls could be displaced by the expected loss of habitat, but this is a low density carnivore and 1 km<sup>2</sup> approximates the smallest home range for a spotted-tailed quoll<sup>61</sup>; so, although home ranges do overlap and > 1 individual may be found in an area, the clearance area is relatively small (~16 ha or ~16 % of a home range) and this impact to potential habitat is not expected to have a significant impact on this species. In the broader area there is extensive habitat for this species, particularly, the forested areas in Trevallyn Nature Recreation Area as well as large areas of native habitat west and north west of the proposal area.

The retention of 21 ha of the 37 ha site with the majority of the 21 ha to be protected being in a continuous area, will significantly mitigate the impact of the proposal on native foraging habitat.

### **Eastern quoll**

Based on the habitat in the proposal area and the records in the broader area it is possible this species utilises the proposal area. The impact may result in an adjustment to home range, by displacement to neighbouring habitat. There is no known evidence that the site is important for dispersal or connectivity at the population level. On its own it is unlikely that the proposal will cause a significant impact to this species.

The retention of 21 ha of the 37 ha site, with the majority of the 21 ha to be protected being in a continuous area, will significantly mitigate the impact of the proposal on native foraging habitat.

### **Eastern barred bandicoot**

This species has been recorded in the proposed impact area. The scale of the development (~16 ha) is unlikely to cause a significant impact on the population either in the vicinity or in total<sup>62</sup>. Predation by domestic pets is likely to result in some animals being killed from time to time although the proximity to protected habitat on each lot will provide some protection and avenue of escape from pets<sup>63</sup>.

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<sup>59</sup> Barker (2022)

<sup>60</sup> West Tamar Council (2021)

<sup>61</sup> This was the spatial scale used by Troy in her research on spotted-tailed quoll: Spatial Ecology of the Tasmanian Spotted-Tailed Quoll submitted in fulfilment of the requirements for the degree of Doctor of Philosophy, School of Biological Sciences, University of Tasmania, November 2014

<sup>62</sup> Barker (2022)

<sup>63</sup> Barker (2022)

In the broader area there is extensive habitat for this species, particularly the forested areas in Trevallyn Nature Recreation Area as well as large areas of native habitat west and north west of the proposal area. Locally, the area consists of a mosaic of forest, residential area and agricultural land that is suitable for the species.

The retention of 21 ha of the 37 ha site, with the majority of the 21 ha to be protected being in a continuous area, will significantly mitigate the impact of the proposal on native foraging habitat.

#### **4.4 Declared weeds**

If unmanaged, the occurrences of declared weeds on the site are likely to increase. Measures outlined in the permit conditions will mitigate the risk of spreading. Such measures include the development of a weed and hygiene plan in the Construction Environmental Management Plan and primary and secondary control of declared weeds on the site<sup>64</sup>.

## **5 Legislation**

### **5.1 Commonwealth *Environment Protection and Biodiversity Conservation Act 1999***

The EPBCA is structured for self-assessment; the proponent must indicate whether or not the project is considered a 'controlled action' which if confirmed would require approval from the Commonwealth Minister.

The development of the subdivision is unlikely to cause a "significant impact" on any of the nationally listed species with the potential to occur in the proposal area. Regardless, the project will be referred, and the impact to the relevant species considered by the Commonwealth.

The residential development footprint does not affect any vegetation communities listed under this Act.

### **5.2 Tasmanian *Threatened Species Protection Act 1995***

The impact to the 50 *Brunonia australis* will require a 'permit to take' from the Department of Primary Industries, Parks, Wildlife and the Environment (DPIPWE).

Although we are unable to confirm the presence of *Poa mollis* from the proposal area, and the records of the species on the NVA are outside the proposal area. It is not expected that a permit to take will therefore be required for this species.

### **5.3 Tasmanian *Nature Conservation Act 2002***

Of the four vegetation communities on site, *Eucalyptus ovata* forest and woodland (DOV), is listed under the Act. No impact to this community is expected by the current subdivision proposal.

### **5.4 Tasmanian *Weed Management Act 1999***

West Tamar is a Zone B municipality for the species of declared weed observed on site (blackberry, slender thistle and gorse). According to the provisions of the *Weed Management Act 1999*, Zone B municipalities are those which host widespread infestations where control and prevention of spread is the principle aim. The containment principles of this Act should be sufficiently met with best practice construction hygiene that prevents the transport of contaminated material off site. Measures to manage weeds have been included in the planning permit<sup>65</sup>.

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<sup>64</sup> West Tamar Council (2021)

<sup>65</sup> West Tamar Council (2021)

## 5.5 West Tamar Interim Planning Scheme 2013

The proposal requires the clearance of native vegetation, as defined in cl4.1.3 of the Planning Scheme, and as such clause E8.6.1 is invoked by the proposal. The proposal does not include Priority Habitat and so meets A1.2 but the proposal is exempt from the Forest Practices system and so no Forest Practices Plan is relevant. Therefore, the Proposal cannot meet A2 and must rely on meeting performance criteria P2.1.

The scheme has been addressed in previous versions of this report but the most recent and thorough consideration of performance criteria at P2.1 is presented in the Statement of Evidence; here each of the criteria are addressed supporting the conclusion that the proposal is consistent with the purpose of the biodiversity code and the objectives of the development standards<sup>66</sup>.

## 6 Conclusion

A planning permit for a 38-lot subdivision at Ecclestone Road in Riverside was granted by the West Tamar Council to the proponent in June 2021. The decision to grant the permit was appealed, and a hearing with the Tasmanian Civil and Administrative tribunal was conducted. The tribunal amended conditions on the development planning permit, and the amended permit was granted in December 2021. This Natural Values Report has been updated with information used in the Statement of Evidence in the tribunal hearing and refers to the permit conditions where relevant.

The proposal will involve the conversion of ~16 ha of native vegetation for building areas and bushfire hazard management. Up to 30 % of each of the lots and over 90 % of the balance will be protected under Part 5 agreements; this is ~21 ha (or 57%) of the project area.

Additional information regarding the natural values present, impact and mitigation measures can be found in the addendum to the natural values report and the Statement of Evidence. Mitigation measures are primarily realised as permit conditions in the amended planning permit issued by the West Tamar Council; these have not been included in detail in this report.

### Vegetation communities

The planned development will remove 11.8 and 4.1 ha of the DAD and NBA vegetation communities, respectively. Neither of these communities are protected under any Act.

### Threatened flora

A total of 50 plants of *Brunonia australis* (TSPA rare) were recorded in the impact area. A 'permit to take' from DPIPWE will be required to remove these plants.

There are NVA records of *Poa mollis* in three locations in the proposal area. This species has not however been recorded during NBES surveys and it is not likely it occurs. Regardless, all previous records are outside the proposed impact area.

No flora listed under the EPBCA were recorded or are expected to occur.

### Threatened fauna

The proposal area contains habitat for several threatened fauna species listed under the TSPA and EPBCA: Tasmanian wedge-tailed eagle, Tasmanian masked owl, Tasmanian devil and quolls, and eastern barred bandicoot.

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<sup>66</sup> Barker (2022)

A wedge-tailed eagles' nest was recorded in the proposal area after the initial natural values surveys were conducted. There has been no evidence of the nest being utilized by this species and given the characteristics of the tree, the location and the nest itself, it is quite possible this nest will never be used for breeding. The nest is about 220 m from the nearest occupied residential lot on an adjacent title and 190 m from Ecclestone Road. The proposal would result in the nest being ~220 m the nearest new residence. The nest will be no closer than it is now to existing development, but the density of the proposed development will be higher than existing development.

The habitat is suitable for Tasmanian masked owl but surveys conducted in August 2021 did not record this species. Six trees were recorded in the proposal area that contain hollows that are potentially suitable for Tasmanian masked owl. One of these is in the proposed impact area. Impact to this species by the proposal is not expected to be significant.

The area is suitable for foraging and breeding for Tasmanian devil and quolls. There is a sighting of Tasmanian devil in the north west of the project area. No dens suitable for these species were located during the surveys and as such no impact on dens is anticipated. Regardless, additional den searches will be undertaken prior to the beginning of land clearance works to confirm the continuing absence of dens because dens may be established in the intervening period. Permit conditions stipulate a pre-clearance survey for dens and processes to follow should potential dens be found.

The proposed impact to potential foraging habitat for any of these species is not expected to be significant and the retention of 21 ha of the 37 ha site with the majority of the 21 ha to be protected being in a continuous area, will significantly mitigate the impact of the proposal on native foraging habitat.

Eastern barred bandicoot has been recorded in the proposed impact area. The scale of the development (~16 ha) is unlikely to cause a significant impact on the population either in the vicinity or in total. Predation by domestic pets is likely to result in some animals being killed from time to time although the proximity to protected habitat on each lot will provide some protection and avenue of escape from pets.

Based on the current proposal and the current knowledge of the Matters of National Environmental Significance present the impact is unlikely to be significant. Regardless, the project will be referred to the Commonwealth for consideration under the EPBCA.

The project is subject to the West Tamar Planning Scheme 2013. There are no apparent impediments to the development in the provisions of the scheme regarding natural values.

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## Appendix A: Plant species recorded in the proposal area

### Status codes:

#### ORIGIN

i - introduced  
d - declared weed WM Act  
en - endemic to Tasmania  
t - within Australia, occurs only in Tas.

#### NATIONAL SCHEDULE

EPBC Act 1999  
CR - critically endangered  
EN - endangered  
VU - vulnerable

#### STATE SCHEDULE

TSP Act 1995  
e - endangered  
v - vulnerable  
r - rare

### Sites:

1	DAD - E506048, N5414409	26/06/2018	Richard White
2	NBA - E506407, N5414836	26/06/2018	Richard White
3	DOV - E506539, N5414470	26/06/2018	Richard White
4	DVG - E506563, N5414426	26/06/2018	Richard White

Site	Name	Common name	Status
<b>DICOTYLEDONAE</b>			
<b>APIACEAE</b>			
1	<i>Hydrocotyle hirta</i>	hairy pennywort	
<b>ASTERACEAE</b>			
1	<i>Carduus pycnocephalus</i>	slender thistle	d
1 4	<i>Cassinia aculeata subsp. aculeata</i>	dollybush	
1 2	<i>Cirsium vulgare</i>	spear thistle	i
1 2	<i>Euchiton japonicus</i>	common cottonleaf	
1	<i>Hypochaeris radicata</i>	rough catsear	i
1	<i>Lagenophora stipitata</i>	blue bottledaisy	
1	<i>Senecio sp.</i>	groundsel	
<b>BORAGINACEAE</b>			
1	<i>Cynoglossum suaveolens</i>	sweet houndstongue	
<b>BRUNONIACEAE</b>			
1	<i>Brunonia australis</i>	blue pincushion	r
<b>CAMPANULACEAE</b>			
1	<i>Wahlenbergia sp.</i>	bluebell	
<b>CASUARINACEAE</b>			
1	<i>Allocasuarina littoralis</i>	black sheoak	
<b>CONVOLVULACEAE</b>			
1 2	<i>Dichondra repens</i>	kidneyweed	
<b>DROSERACEAE</b>			
1	<i>Drosera hookeri</i>	grassland sundew	en
1	<i>Drosera peltata subsp. auriculata</i>	tall sundew	
<b>EPACRIDACEAE</b>			
1	<i>Acrotriche serrulata</i>	ants delight	
1	<i>Epacris impressa</i>	common heath	
1	<i>Lissanthe strigosa subsp. subulata</i>	peachberry heath	
<b>EUPHORBIACEAE</b>			
1	<i>Poranthera microphylla</i>	small poranthera	
<b>FABACEAE</b>			
1	<i>Bossiaea prostrata</i>	creeping bossiaea	
1	<i>Daviesia latifolia</i>	hop bitterpea	
3	<i>Ulex europaeus</i>	gorse	d
<b>FUMARIACEAE</b>			
1	<i>Fumaria sp.</i>	fumitory	i
<b>GENTIANACEAE</b>			
1 2 4	<i>Centaurium erythraea</i>	common centaury	i
1	<i>Centaurium tenuiflorum</i>	slender centaury	i
1	<i>Cicendia filiformis</i>	slender cicendia	i

	<b>GERANIACEAE</b>		
1	<i>Geranium sp.</i>	native geranium	
	<b>GOODENIACEAE</b>		
1	<i>Goodenia lanata</i>	trailing native-primrose	
	<b>HALORAGACEAE</b>		
1 2	<i>Gonocarpus tetragynus</i>	common raspwort	
	<b>LAURACEAE</b>		
1 3 4	<i>Cassytha melantha</i>	large dodderlaurel	
	<b>MIMOSACEAE</b>		
1 2 3 4	<i>Acacia dealbata subsp. dealbata</i>	silver wattle	
1	<i>Acacia floribunda</i>	gossamer wattle	i
2 4	<i>Acacia mearnsii</i>	black wattle	
1 2	<i>Acacia melanoxylon</i>	blackwood	
1	<i>Acacia verticillata</i>	prickly moses	
	<b>MYRTACEAE</b>		
1 2 3 4	<i>Eucalyptus amygdalina</i>	black peppermint	en
3	<i>Eucalyptus ovata var. ovata</i>	black gum	
1 3 4	<i>Eucalyptus viminalis subsp. viminalis</i>	white gum	
1 3	<i>Melaleuca ericifolia</i>	coast paperbark	
	<b>OLEACEAE</b>		
1	<i>Ligustrum vulgare</i>	privet	i
	<b>OXALIDACEAE</b>		
1 2 4	<i>Oxalis perennans</i>	grassland woodsorrel	
	<b>PITTOSPORACEAE</b>		
1	<i>Billardiera mutabilis</i>	green appleberry	
1 2 4	<i>Bursaria spinosa subsp. spinosa</i>	prickly box	
1	<i>Pittosporum undulatum</i>	sweet pittosporum	i
	<b>PLANTAGINACEAE</b>		
1	<i>Plantago lanceolata</i>	ribwort plantain	i
	<b>POLYGALACEAE</b>		
1	<i>Comesperma volubile</i>	blue lovecreeper	
	<b>PRIMULACEAE</b>		
1	<i>Lysimachia arvensis</i>	scarlet pimpernel	i
	<b>RANUNCULACEAE</b>		
1	<i>Clematis aristata</i>	mountain clematis	
1 2 3 4	<i>Clematis sp.</i>	clematis	
	<b>ROSACEAE</b>		
1 2	<i>Acaena novae-zelandiae</i>	common buzzy	
4	<i>Cotoneaster sp.</i>	cotoneaster	i
2	<i>Rosa rubiginosa</i>	sweet briar	i
1 3 4	<i>Rubus fruticosus</i>	blackberry	d
	<b>RUBIACEAE</b>		
1 2	<i>Coprosma quadrifida</i>	native currant	
1	<i>Galium sp.</i>	bedstraw	
	<b>SANTALACEAE</b>		
1 2 4	<i>Exocarpos cupressiformis</i>	common native-cherry	
	<b>SCROPHULARIACEAE</b>		
1	<i>Veronica calycina</i>	hairy speedwell	
	<b>SOLANACEAE</b>		
1	<i>Solanum laciniatum</i>	kangaroo apple	
	<b>THYMELAEACEAE</b>		

1	<i>Pimelea humilis</i>		dwarf riceflower	
	<b>VIOLACEAE</b>			
1	<i>Viola hederacea</i>		ivyleaf violet	
	<b>MONOCOTYLEDONAE</b>			
	<b>ARACEAE</b>			
1	<i>Zantedeschia aethiopica</i>		arum lily	i
	<b>CYPERACEAE</b>			
1	<i>Carex breviculmis</i>		shortstem sedge	
1 2 3 4	<i>Gahnia radula</i>		thatch sawsedge	
1 2 3	<i>Lepidosperma ensiforme</i>		arching sword-sedge	
1 2 3 4	<i>Lepidosperma laterale</i>		variable sword-sedge	
	<b>IRIDACEAE</b>			
1	<i>Diplarrena moraea</i>		white flag-iris	
	<b>JUNCACEAE</b>			
1	<i>Juncus procerus</i>		tall rush	
1	<i>Juncus sarophorus</i>		broom rush	
	<b>LILIACEAE</b>			
1	<i>Arthropodium strictum</i>		chocolate lily	
1	<i>Bulbine bulbosa</i>		golden bulbine-lily	
1	<i>Burchardia umbellata</i>		milkmaids	
1	<i>Dianella revoluta</i>		spreading flaxlily	
1	<i>Thysanotus patersonii</i>		twining fringelily	
1	<i>Wurmbea uniflora</i>		oneflower early nancy	
	<b>ORCHIDACEAE</b>			
1	<i>Chiloglottis triceratops</i>		threehorned bird-orchid	
1	<i>Pterostylis sp.</i>		greenhood	
1	<i>Thelymitra nuda</i>		plain sun-orchid	
	<b>POACEAE</b>			
1	<i>Agrostis capillaris</i>		brown top bent grass	i
1	<i>Aira caryophylla</i>		silvery hairgrass	i
1	<i>Anthoxanthum odoratum</i>		sweet vernalgrass	i
1	<i>Austrostipa semibarbata</i>		fibrous speargrass	
1 2 4	<i>Austrostipa sp.</i>		speargrass	
1 4	<i>Briza minor</i>		lesser quaking-grass	i
1	<i>Cynosurus echinatus</i>		rough dogstail	i
1 4	<i>Dactylis glomerata</i>		cocksfoot	i
1	<i>Ehrharta distichophylla</i>		hairy ricegrass	
1	<i>Ehrharta stipoides</i>		weeping grass	
1 4	<i>Poa labillardierei</i>		silver tussockgrass	
1	<i>Poa rodwayi</i>		velvet tussockgrass	
1 4	<i>Poa sp.</i>		poa	
1 2	<i>Rytidosperma sp.</i>		wallabygrass	
1 2 4	<i>Themeda triandra</i>		kangaroo grass	
	<b>XANTHORRHOEACEAE</b>			
1 2 3	<i>Lomandra longifolia</i>		sagg	
	<b>PTERIDOPHYTA</b>			
	<b>ASPIDACEAE</b>			
2 3	<i>Polystichum proliferum</i>		mother shieldfern	
	<b>BLECHNACEAE</b>			
3	<i>Blechnum nudum</i>		fishbone waterfern	
	<b>DENNSTAEDTIACEAE</b>			
1 3	<i>Pteridium esculentum subsp. esculentum</i>		bracken	
	<b>DICKSONIACEAE</b>			
1 3	<i>Dicksonia antarctica</i>	soft treefern	soft treefern	