



23 DECEMBER 2021

Agricultural and Natural Values report

Report for: Onefox Investments Pty Ltd

Property Location: 689 West End Rd, Leeka

Prepared by: Michael Tempest and Sally Scrivens
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SUMMARY	
Client:	Onefox Investments Pty Ltd
Property identification:	CT 138530/1 (41ha), 689 West End Road, Leeka 7255 Rural Zone (Flinders Planning Scheme 2000).
Proposal:	Proposed Subdivision of the existing title into four lots.
Purpose:	To assess the agricultural/primary industry aspects of the proposal and consider natural values.
Published Land capability:	Published Land Capability at 1:100,000 maps 39.8ha as Class 6 and 1.2ha as Class 6+7.
Assessment comments:	We conducted a desktop feasibility assessment, followed by a field inspection on the 30th November 2021 to confirm or otherwise the desktop findings. This report summarises the findings of the desktop and field assessment.
Conclusion:	<p>The subject title is approximately 41ha in area and is almost entirely covered in native vegetation, with an existing dwelling in the south east of the title. Due to existing vegetation, Land Capability limitations, lack of a developed irrigation water resource, and proximity of residential development, both on the title and on adjacent titles, the agricultural and primary industry potential of the subject title is considered to be negligible. The title is also limited for farming in conjunction with other land in the vicinity. The proposed subdivision is not expected to result in land use conflict with existing land uses in the vicinity due to their existing residential use.</p> <p>The subject title was found to contain two threatened flora species and is likely included in the foraging habitat boundaries of the wedge-tailed eagle. The proposed subdivision is not expected to impact on these species, however, the bushfire hazard management area on Lot 1 may need to retain <i>Acacia uncifolia</i> coast wirilda, depending on building size and location within the building envelope. If future development cannot avoid impacting on threatened flora species, a permit will be required. In addition, the building envelope on Lot 1 should be subject to weed control as part of residential development to prevent further spread of the species.</p> <p>The proposed subdivision is not expected to cause significant adverse impacts on coastal waters, watercourses, or the skyline.</p>
Assessment by:	 <hr/> <p>Michael Tempest Senior Consultant</p>  <hr/> <p>Sally Scrivens Consultant</p>

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1 Introduction

The subject title is located to the east of Leeka on the southern side of West End Road and is zoned 'Rural' (Flinders Planning Scheme 2000). The title is also located within a 'Visually Sensitive Area'. The proponent seeks to subdivide the title into four lots. Lot 3 has an existing dwelling and each of the other three lots have a specified 0.3ha building envelope.

The following section of the Planning Scheme is relevant;

5.8.3 Subdivision Standards

- a) A lot less than 40 hectares may be approved at Council's discretion for the following purposes;
 - ii. For a use, other than agriculture, that is consistent with the zone intent, desired zone character and zone guidelines;
- b) In considering an application under Clause 5.8.3(b) Council shall require a detailed assessment of the proposal prepared by a suitably qualified, independent, agricultural consultant that demonstrates:
 - ii. other cases [when not for intensive agricultural use], the agricultural capacity of the proposed lot(s) (including any balance lot) and methods which will be employed to safeguard their agricultural capacity;
- c) Before accepting an application under Clause 5.8.3(b) Council may require the applicant to submit a Development Plan for the land to which the application relates. The Development Plan should show that:
 - i. Subdivision will not fragment or diminish the agricultural potential of the land;
 - ii. Subdivision will not result in ribbon development along roads and coastlines;
 - iii. Development will not cause significant adverse impact on the natural environment, flora and fauna, coastal waters, watercourses or skylines;
 - iv. Development or use will likely not result in land use conflict with existing land uses in the vicinity.

An initial desktop feasibility assessment was undertaken followed by a field inspection on the 30th November 2021 to confirm or otherwise the desktop study findings of the agricultural and natural values assessment. This report assesses the agricultural and natural values aspects of the proposal and summarises the findings of the desktop and field assessments.

2 Description

The subject title, CT 138530/1 (41ha), is located to the east of Leeka on the southern side of West End Road and extends to the coast. There is an existing dwelling in the south east of the title and the balance of the title is primarily covered in native vegetation (see Natural Values section for further details). The existing access

to the dwelling from West End Road runs along the western boundary and is shared with the adjacent title (CT 153187/4). An access track also extends west from the dwelling to the western title boundary. The title primarily has a south easterly aspect, with elevations ranging between approximately 80m above sea level (ASL) in the north west of the title and 10m ASL in the south of the title.

Published Land Capability (1:100,000 scale) maps the majority of the land as Class 6, with a small, 1.2ha area in the south west mapped as Class 6+7. Class 6 land is defined as; land that is marginally suitable for grazing due to severe limitations. Class 6+7 land is described as; at least 60% marginally suited to grazing due to severe limitations, with up to 40% land with very severe to extreme limitations that make it unsuitable for agricultural use. See Appendix 3 for full descriptions of Land Capability Classes.

The title has no existing irrigation water resources and there are no mapped drainage lines on the title. There are also no existing mining leases on the title or in the vicinity.

Surrounding titles to the north, east, and west are all zoned Rural. To the south, along the coastline, is a strip of Parks land that is zoned Environmental Management Recreation. To the east and south east are three titles between approximately 4ha and 6ha. These titles all have an existing dwelling and are primarily covered in native vegetation. To the north east is a 2.6ha title covered in native vegetation. To the north is West End Road, and to the north of this is an extension of the adjacent title to the north west. This title is primarily covered in native vegetation with some development evident in the south of the title. Adjacent to the west is a 12.8ha title which has an existing dwelling in the south of the title. None of the surrounding titles are currently utilised for agricultural or primary industry activities.

Underlying geology (250,000) is mapped as limestone in the west (Qpl), Dominantly syenogranite/monzogranite (Dgaas) in the south west, and dominantly alkali-feldspar granite (Dgafs) in the east (Mineral Resources Tasmania 2010).

The proposal will see the title divided into four lots, with Lot 1 and 2 in the north (5.1ha each) and Lots 3 (containing the existing dwelling) and 4 in the south (11.1ha and 19.7ha, respectively). Lots 1, 2, and 4 have a 0.3ha specified building envelope.

3 Agricultural Value

The subject title currently has an existing dwelling in the south east of the title and is otherwise covered in native vegetation, including a threatened native vegetation community. The title is not utilised for agriculture or any primary industry activity. With Land Capability mapped as predominately Class 6 and some Class 6+7, a lack of irrigation water resources, and the presence of an existing dwelling, it is highly unlikely that the clearance of the land would be economical for agriculture. Forestry activity on Flinders Island is minimal and this is unlikely to change in the foreseeable future, therefore consideration of native forest harvesting and regeneration of the existing vegetation has not been considered in this report. As a result of these existing limitations, the subject title is practically incapable of supporting an agricultural or primary industry use. In addition, the objectives of the 'Visually Sensitive Area' overlaying the title aim to retain the natural appearance of the title and retain and restore where possible the natural vegetation cover.

Whilst the productivity of land with these characteristics is normally best realised if farmed in conjunction with other land, in this case the limitations of the title would limit its ability to be farmed in conjunction with other land for any agricultural or primary industry use. In addition, the characteristics of surrounding titles indicate that there is negligible chance of this title being farmed in conjunction with any adjacent land.

While the title has limited capacity to contribute to agriculture or primary industry, the potential for the subdivision to result in land use conflict with existing land uses in the vicinity also needs to be considered. Because of the lack of agricultural and primary industry activity and lack of future potential for agricultural and primary industry activity on land in the vicinity of the subject title, the proposed subdivision is unlikely to result in any land use conflict.

4 Natural Values

A desktop assessment was undertaken to determine the likely vegetation, threatened flora species, and threatened fauna species associated with the subject land. The desktop assessment was followed by a site visit on the 30th November 2021, timed for peak flowering time of most species (spring). The proposed building envelopes and surrounds were inspected with a narrowly spaced wandering meander technique, focusing on vegetation community identification and a threatened species risk assessment based on habitat suitability.

While the proposed building envelopes and surrounds have been assessed, no survey can guarantee that all flora will be recorded in a single site visit due to limitations on seasonal and annual variation in abundance and the presence of material for identification. In addition, the nature of this assessment did not warrant a thorough inspection across the title. While all significant species known to occur in the area were considered, and an optimal survey time (spring) was utilised, some species, or additional specimens of observed species, may have been overlooked.

4.1 VEGETATION

The majority of the subject land is covered in native vegetation. TASVEG 4.0 maps approximately 14.1 ha in the north of the area as *Eucalyptus viminalis* - *Eucalyptus globulus* coastal forest and woodland (DVC), 15.5ha in the south as *Allocasuarina verticillata* forest (NAV), and 11.7ha in the south west as coastal scrub (SSC). DVC is listed as a threatened vegetation community under the *Nature Conservation Act 2002*.

The 0.3ha proposed building site on Lot 2, as well as the surrounding area, is dominated by *Allocasuarina verticillata* drooping sheoak, with a sparse understory including *Acacia uncifolia* coast wirilda, *Poa tussockgrass*, *Swainsona lessertiifolia* coast poisonpea, *Oxalis spp.* woodsorrel, and *Senecio vulgaris* common groundsel.

The vegetation at the building site on Lot 1 has a similar composition as that on Lot 2, however, the area appears to have been previously disturbed and also contains a more open area with *Senecio linearifolius* fireweed groundsel, *Zantedeschia aethiopica* arum lily, *Anagallis arvensis var. arvensis* scarlet pimpernel, *Solanum laciniatum* kangaroo apple, and *Bulbine bulbosa* golden bulbine-lily. *Leptospermum laevigatum* coast teatree any *Myoporum insulare* common boobialla are also within the surrounding area.

The Lot 4 building site and surrounds is comprised entirely of dense *Leptospermum laevigatum* coast teatree.

The vegetation within and around the proposed building areas on Lot 1 and Lot 2 would be best described as *Allocasuarina verticillata* forest (NAV), rather than the mapped *Eucalyptus viminalis* - *Eucalyptus globulus* coastal forest and woodland (DVC). Based on the vegetation recorded within the proposed building envelope and surrounds on Lot 4, the vegetation community in this area would be best described as coastal scrub on alkaline sands (SCA).

There is an existing vehicle track from Lot 3 that traverses across the southern portion of Lot 4, approximately 50m to the north of the proposed building envelope. Between the access and the building envelope is a strip

of NAV and then an extension of the SCA community. While the access to Lot 3 and Lot 4 is existing, it is understood that a new access will be created for Lot 1 and Lot 2. It is expected that any impact on vegetation communities as a result of access to the building envelopes will be negligible based on the vegetation both retained on the title and located in the surrounding area.

4.2 FLORA

According to the Natural Values Atlas, 19 threatened flora species have been recorded within a 5km radius of the subject title. Based on the availability of suitable habitat within and surrounding the proposed building envelopes and location of existing records, one (*Myoporum parvifolium* creeping boobialla) of these 19 species is considered to be at high risk of occurring within the proposed building envelopes and an additional four species are considered to be at medium risk, as discussed below. The remaining 14 species are considered to be at low risk of occurring within the proposed building envelopes and therefore at low risk of being impacted as a result of the proposed development. See Table 4-1 for risk assessment and Appendix 4 for habitat preferences.

Myoporum parvifolium creeping boobialla occurs in disturbed habitat fringing *Allocasuarina* forest and has previously been recorded along West End Road. The proposed building envelope on Lot 1 contains a disturbed area within *A. verticillata* forest, however, creeping boobialla was not observed within this area. The proposal is therefore expected to have a low risk of impacting on this species.

Acacia uncifolia coast wirilda is known to occur in dry woodland areas with *Allocasuarina verticillata* drooping sheoak. Coast wirilda was observed within and around the proposed building envelopes of Lots 1 and 2 and to the south of the access to Lot 4 to the edge of the scrub community. Within these areas, the species is relatively sparse and scattered amongst the drooping sheoak. Given the distribution of the species, it is considered feasible that residential development within the proposed building envelopes can avoid impacting on this species, however, this may involve retaining occurrences of this species within bushfire hazard management areas around future dwellings, particularly on Lot 1. Any disturbance and impact on this species should be avoided where possible. A permit will be required if any disturbance to the species is unavoidable.

Acrotriche cordata coast groundberry is known to occur in scrub and forest near the coast and has previously been recorded approximately 2km north west of the subject title. The species was not observed within any of the proposed future dwelling locations and is therefore considered to be at low risk of being impacted by the proposed development.

Pterostylis sanguinea banded greenhood is known to occur in coastal tea tree scrub and is therefore considered to have potentially suitable habitat within the proposed future dwelling site on Lot 4. However, the vegetation in this area was dense and entirely comprised of *Leptospermum laevigatum* coast teatree. While flowers are required for the identification of this species (flowering period June-September (FPA 2017)), it is considered unlikely that this species would occur within this area and this species is therefore considered to be at low risk of being impacted by the proposed development. In addition, the only record of the species previously recorded in the greater area is from 1968.

Zygophyllum billardierei coast twinleaf is known to occur in forests and is therefore considered to have potentially suitable habitat within the proposed building envelopes on Lots 1 and 2. Coast twinleaf was not observed within the proposed building envelopes; however, it was observed on all four proposed Lots. The majority of these observations are associated with disturbed areas, such as adjacent to the existing vehicle track between the existing dwelling on Lot 3 and the proposed building envelope on Lot 4. As no observations of the species were made within the proposed building envelopes, and given the species appears to favour disturbed areas, the proposed subdivision and subsequent residential development is considered to present a low risk to this species.

Table 4-1: Risk assessment for threatened flora listed in NVA as being recorded within 5km of the subject title. Risk assessment based on occurrence of species within proposed building envelopes.

THREATENED FLORA SPECIES				PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT ¹
SPECIES NAME		NVA RECORD	STATUS S*/N*		
LATIN	COMMON				
<i>Acacia uncifolia</i>	Coast wirilda	Within 5km	r	Occurs in dry open woodland with <i>A. verticillata</i> . Suitable habitat. Medium risk.	Low risk
<i>Acrotriche cordata</i>	Coast groundberry	Within 5km	v	Associated with broken rocky ground in scrub and low forest near the coast. Potential suitable habitat. Medium risk.	Low risk
<i>Brachyscome perpusilla</i>	Tiny daisy	Within 5km	r	Associated with rockplates and grassy herbfields. No suitable habitat. Low risk.	Low risk
<i>Cotula vulgaris</i> var. <i>australasica</i>	Slender buttons	Within 5km	r	Associated with saline herbfields, rocky coastal outcrops and wet/brackish swamps. No suitable habitat. Low risk.	Low risk
<i>Drosera glanduligera</i>	Scarlet sundew	Within 5km	r	Occur in heathlands and woodlands. No suitable habitat. Low risk.	Low risk
<i>Eucalyptus globulus</i> subsp. <i>pseudoglobulus</i>	Gippsland blue gum	Within 5km	r	Records on Flinders Island more likely <i>E. globulus</i> ssp. <i>globulus</i> . Low risk.	Low risk
<i>Eutaxia microphylla</i>	Spiny bushpea	Within 5km	r	Occurs in windswept coastal heathland on calcarenite. No suitable habitat. Low risk.	Low risk
<i>Isopogon ceratophyllus</i>	Horny conebrush	Within 5km	v	Occurs on acidic soils in dry heathlands. No suitable habitat. Low risk.	Low risk

¹ See text for explanatory information

THREATENED FLORA SPECIES				PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT ¹
SPECIES NAME		NVA RECORD	STATUS S*/N ⁺		
LATIN	COMMON				
<i>Lasiopetalum baueri</i>	Slender velvetbush	Within 5km	r	Occurs in open coastal shrubbery on dolerite. No suitable habitat. Low risk.	Low risk
<i>Leucopogon esquamatus</i>	Swamp beardheath	Within 500m	r	Occurs in sandy heathland and heathy woodland. No suitable habitat. Low risk.	Low risk
<i>Myoporum parvifolium</i>	Creeping boobialla	Within 500m	v	Occurs in disturbed habitat fringing <i>Allocasuarina</i> forest and in <i>Gahnia</i> sedgeland. Potentially suitable habitat. High risk.	Low risk
<i>Parietaria debilis</i>	Shade pellitory	Within 5km	r	Associated with rocky cliffs and moist shaded areas. No suitable habitat. Low risk.	Low risk
<i>Pomaderris intermedia</i>	Lemon dogwood	Within 5km	r	Occurs in heathland and heathy woodland. No suitable habitat. Low risk.	Low risk
<i>Pomaderris paniculosa</i> subsp. <i>paralia</i>	Shining dogwood	Within 5km	r	Occurs in exposed sites on cliff lines. No suitable habitat. Low risk.	Low risk
<i>Pterostylis sanguinea</i>	Banded greenhood	Within 5km	r	Occurs in tea tree scrub. Potential suitable habitat. Medium risk.	Low risk
<i>Scaevola albida</i>	Pale fanflower	Within 5km	v	Occurs between 10-30m ASL on Quaternary sands with limestone deposits. No suitable habitat. Low risk.	Low risk
<i>Spyridium parvifolium</i>	Dustymiller	Within 5km	p	Occurs in shrubby dry sclerophyll forest and woodland. No suitable habitat. Low risk.	Low risk
<i>Triglochin minutissima</i>	Tiny arrowgrass	Within 5km	r	Inhabits mudflats and swamps. No	Low risk

THREATENED FLORA SPECIES				PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT ¹
SPECIES NAME		NVA RECORD	STATUS S*/N ⁺		
LATIN	COMMON				
				suitable habitat. Low risk.	
<i>Zygophyllum billardierei</i>	Coast twinleaf	Within 5km	r	Occurs in forests. Potential suitable habitat. Medium risk.	Low risk

* refers to listing status under the Tasmanian Threatened Species Act 1995: r = rare, v = vulnerable e = endangered, p = pending

+ refers to listing status at the federal level under the Environment Protection and Biodiversity Conservation Act 1999: VU = Vulnerable, EN = Endangered, CR = Critically Endangered, P = Pending

4.3 FAUNA

The Forest Practices Biodiversity Values Database and the Tasmanian Natural Values Atlas identified 11 threatened fauna species with potential to occur onsite. The closest eagle nests in the vicinity are approximately 3.2km away from the subject title to the north east.

No threatened fauna species were identified during the site visit; however, of the 11 species identified in the Natural Values Atlas and Biodiversity Values Database, one species (New Holland mouse) was considered to be at medium risk of occurring within the proposed building envelopes based on potentially suitable habitat and location of previous records, as discussed below. It is likely that the title is included in the ranging boundaries of the wedge-tailed eagle, however, the proposal presents a low risk to this species. All other species are considered to be at low risk of being impacted by the proposed development. See Table 4- for risk assessment and Appendix 4 for habitat preferences.

The New Holland mouse has been recorded within 5km of the subject titles and within 500m based on range boundaries. The *Allocasuarina*-dominated forests on sandy substrates of the building envelopes on Lots 1 and 2 provide potential suitable habitat for the species, however, the key indicator plant species for the New Holland mouse were absent, and on Flinders Island, the species is more typically associated with heathlands. The New Holland mouse is also associated with the early to mid-stages of regeneration following fire (Natural and Cultural Heritage Division 2012) and, according to the NVA, there is no fire history within 1km of the subject title. The lack of key indicator species, heathland, and fire history within the subject titles suggests that the likely impact on the species as a result of the proposal will be minimal.

Table 4-2: Risk assessment for threatened fauna species listed in NVA as being recorded within 5km and/or with range boundaries (Forest Practices Biodiversity Values Database) that overlay the subject title. Risk assessment based on occurrence of species within proposed building envelopes.

THREATENED FAUNA SPECIES					PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT ²
SPECIES NAME		NVA RECORD	STATUS S*/N ⁺	FPA ^x RANGE CLASS		
LATIN	COMMON					
<i>Accipiter novaehollandiae</i>	Grey goshawk	No record	e	PR	Prefer wet forest adjacent to a fresh waterbody. No suitable habitat. Low risk.	Low risk
<i>Antipodia chaostola</i>	Chaostola skipper	Within 500m based on RB.	e/EN	PR	Inhabits dry forest/woodland supporting particular <i>Gahnia</i> sp. No suitable habitat. Low risk.	Low risk
<i>Aquila audax subsp. fleayi</i>	Tasmanian wedge-tailed eagle	Within 500m based on RB.	e/EN	PR	Potential foraging habitat is a wide variety of forest and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10ha) of eucalypt or mixed forest. Foraging habitat only. Low risk.	Low risk
<i>Galaxiella pusilla</i>	Eastern dwarf galaxias	Within 500m based on RB.	v/VU	PR	Inhabit slow flowing waterbodies. No suitable habitat. Low risk.	Low risk
<i>Haliaeetus leucogaster</i>	White-bellied sea-eagle	Record within 5km. Within 500m based on RB.	v	PR	Potential foraging habitat is any large waterbody. Prefers tall eucalypts in tracts of over 10ha for nesting. No suitable habitat. Low risk.	Low risk
<i>Limnodynastes peroni</i>	Striped marsh frog	Within 500m based on RB.	e		Requires permanent non-flowing water bodies with abundant aquatic vegetation. No suitable habitat. Low risk.	Low risk
<i>Litoria raniformis</i>	Green and gold frog	Within 500m based on RB.	v/VU	PR	Associated with waterbodies with vegetation in or around them. No suitable habitat. Low risk.	Low risk

² See text for explanatory information

THREATENED FAUNA SPECIES					PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT ²
SPECIES NAME		NVA RECORD	STATUS S*/N ⁺	FPA ^x RANGE CLASS		
LATIN	COMMON					
<i>Pardalotus quadragintus</i>	Forty-spotted pardalote	Within 500m based on RB.	e/EN	PR	Occurs in forest or woodland supporting <i>Eucalyptus viminalis</i> . No suitable habitat. Low risk.	Low risk
<i>Prototroctes maraena</i>	Australian grayling	Within 5km based on RB.	v/VU	PR	Occurs in streams. No suitable habitat. Low risk.	Low risk
<i>Pseudemoia pagenstecheri</i>	Tussock skink	Within 500m based on RB.	v	PR	Prefers grasslands and grassy woodlands with >20% native grass cover. No suitable habitat. Low risk.	Low risk
<i>Pseudomys novaehollandiae</i>	New Holland mouse	Record within 5km. Within 500m based on RB.	e/VU	PR	Habitat includes <i>Allocasuarina</i> dominated forests on sandy substrates. Potential suitable habitat. Medium risk.	Low risk

* refers to listing status under the Tasmanian Threatened Species Act 1995: r = rare, v = vulnerable e = endangered, p = pending

⁺ refers to listing status at the federal level under the Environment Protection and Biodiversity Conservation Act 1999: VU = Vulnerable, EN = Endangered, CR = Critically Endangered, P = Pending

^x refers to range boundaries as specified in the Forest Practices Biodiversity database: PR = Potential Range, CR = Core Range, KR = Known Range.

4.4 DISTURBANCE

The Natural Values Atlas records slender thistle, African boxthorn, white hoarhound, and swanplant as being present within 5km of the subject title, however, none of these species, nor any other declared or priority weeds were observed on site. Arum lily and scarlet pimpernel were observed within the proposed building envelope on Lot 1 and it is recommended that these weeds are controlled as part of the development within the building envelope to prevent further spread of the species.

4.5 COASTAL WATERS, WATERCOURSES AND SKYLINES

There are no watercourses mapped in the vicinity of the title. While the title is adjacent to the coastline, the closest building envelope (on Lot 4) is approximately 120m from the coastline. The proposed development is therefore not expected to cause significant adverse impacts on any watercourses or coastal waters.

The title is sloped with a south/south easterly aspect. The most elevated part of the subject title is in the north west, which sits at approximately 80m ASL. To the north of the subject title, the land continues to increase in elevation to approximately 280m ASL. As the title is on a hillside, the proposed subdivision and subsequent developments are not expected to cause significant adverse impacts on the skyline.

5 Conclusions

The subject title is approximately 41ha in area and is almost entirely covered in native vegetation, with an existing dwelling in the south east of the title. Due to existing vegetation, Land Capability limitations, lack of a developed irrigation water resource, and proximity of residential development, both on the title and on adjacent titles, the agricultural and primary industry potential of the subject title is considered to be negligible. The title is also limited for farming in conjunction with other land in the vicinity. The proposed subdivision is not expected to result in land use conflict with existing land uses in the vicinity due to their existing residential use.

The subject title was found to contain two threatened flora species and is likely included in the foraging habitat boundaries of the wedge-tailed eagle. The proposed subdivision is not expected to impact on these species, however, the bushfire hazard management area on Lot 1 may need to retain *Acacia uncifolia* coast wirilda, depending on building size and location within the building envelope. If future development cannot avoid impacting on threatened flora species, a permit will be required. In addition, the building envelope on Lot 1 should be subject to weed control as part of residential development to prevent further spread of the species.

The proposed subdivision is not expected to cause significant adverse impacts on coastal waters, watercourses, or the skyline.

6 References

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Appendix 1: Maps

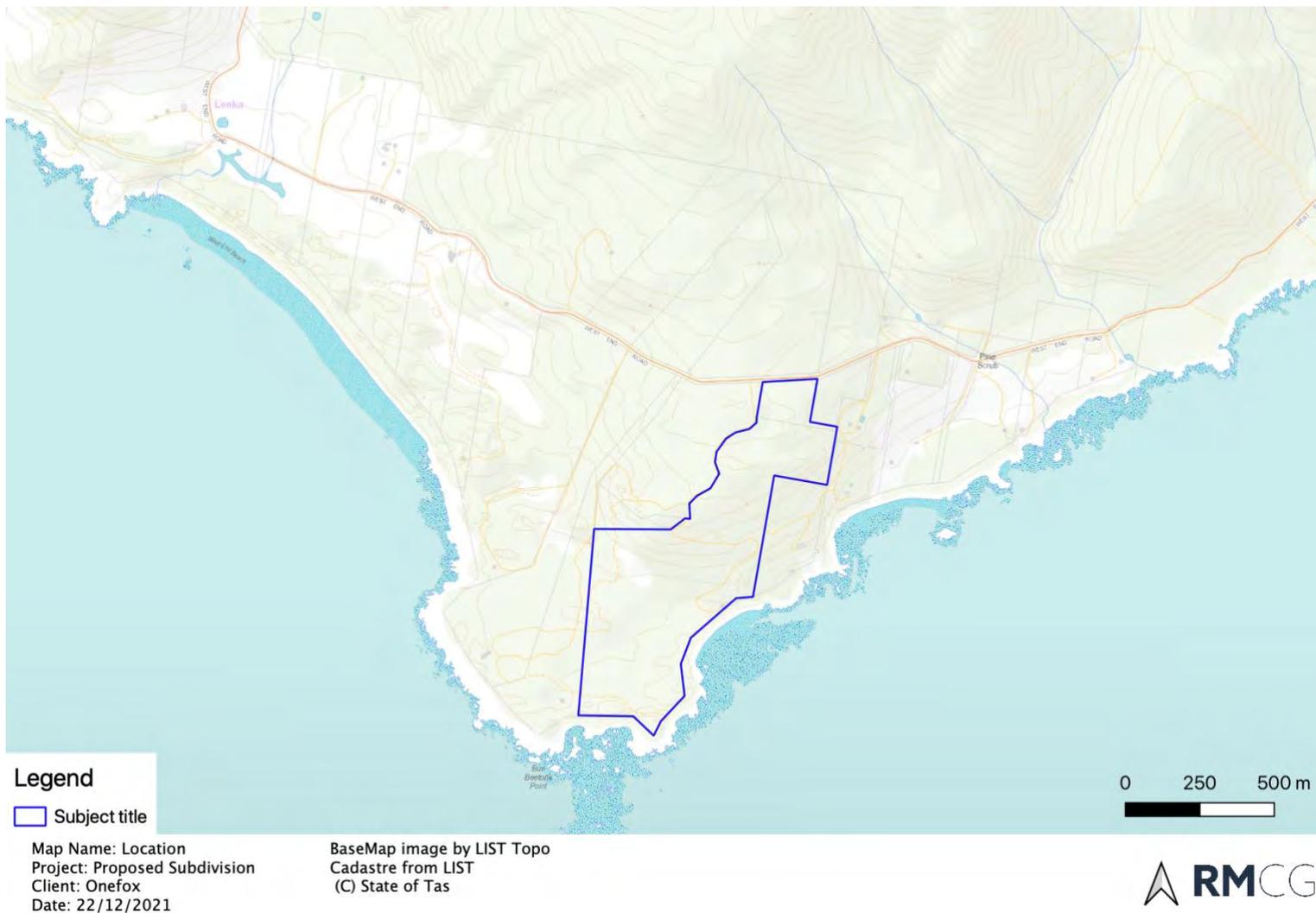
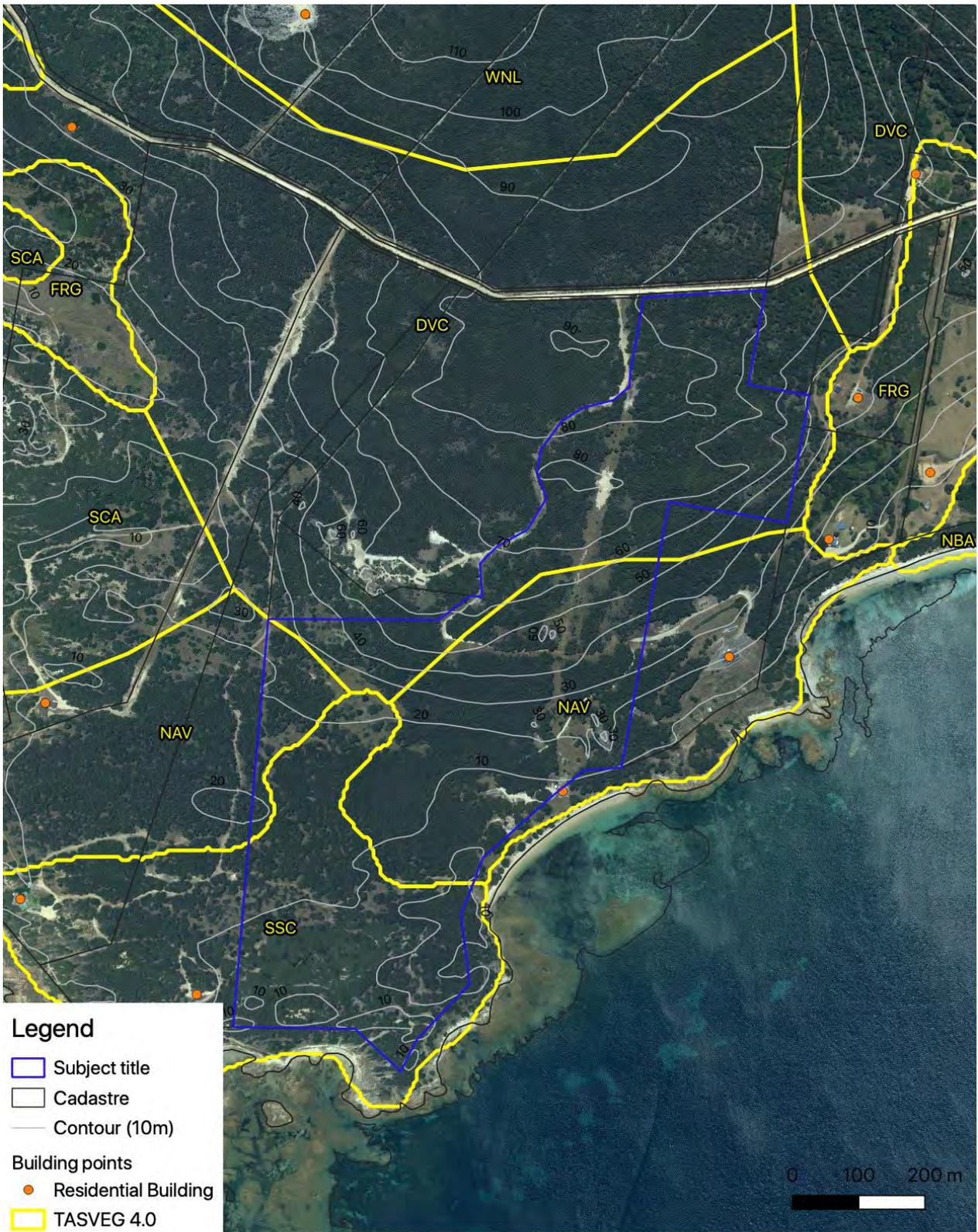


Figure A1-1: Location

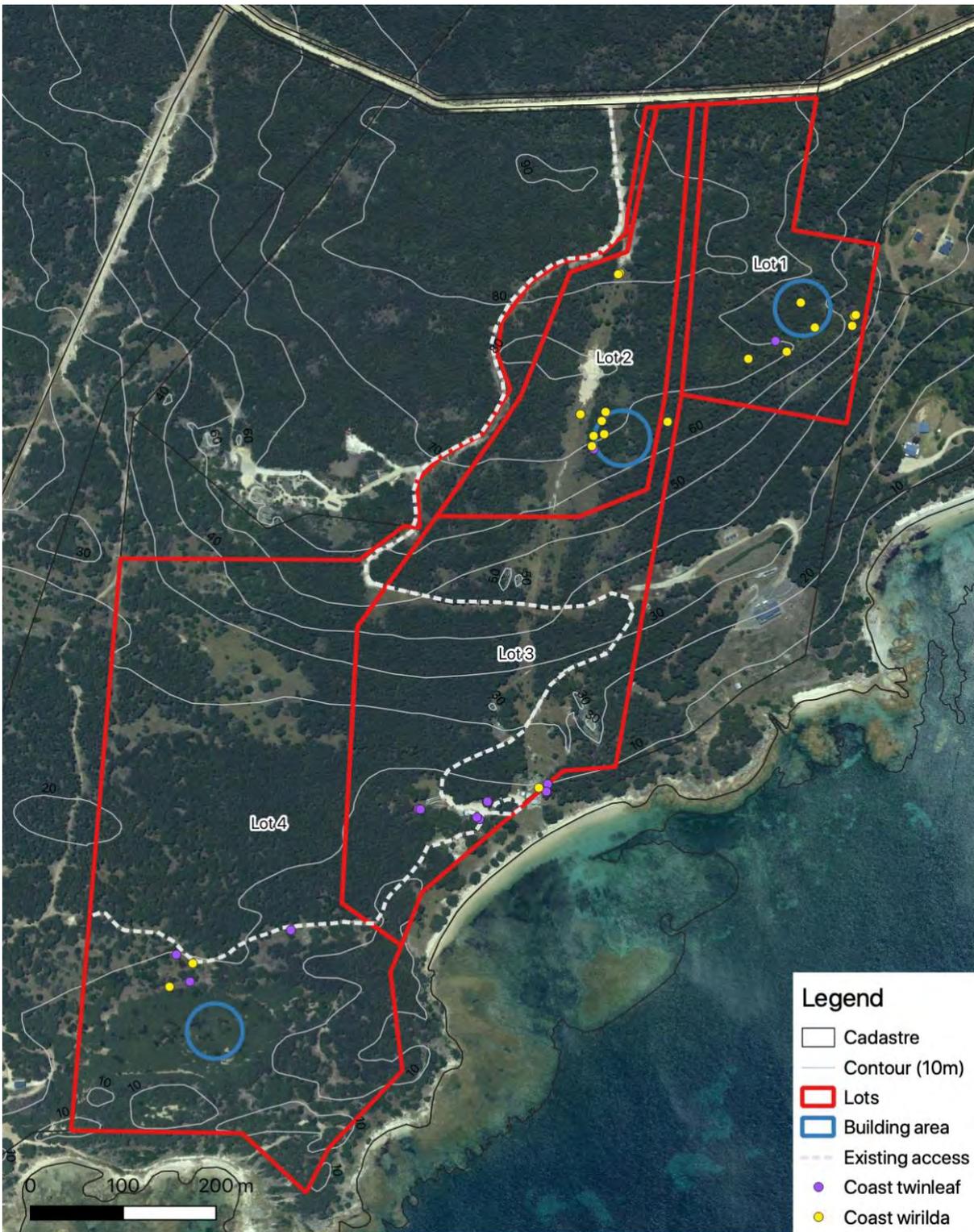


Map Name: Aerial
 Project: Proposed Subdivision
 Client: Onefox
 Date: 22/12/2021

BaseMap image by LIST Ortho
 Cadastre, contours, building points, and
 vegetation from LIST
 (C) State of Tas



Figure A1-2: Aerial image



Map Name: Proposal
 Project: Proposed Subdivision
 Client: Onefox
 Date: 22/12/2021

BaseMap image by LIST Ortho
 Cadastre and contours from LIST
 (C) State of Tas



Figure A1-3: Proposal and threatened flora records. Note the records are from surveyed sites only. Not all coast twinleaf present along the access between the existing dwelling and western boundary are shown.

Appendix 2: Photos

All photographs taken by Sally Scrivens 30/11/2021



Figure A2-1: Typical vegetation (*Allocasuarina verticillata* forest (NAV)) within the proposed building envelope of Lot 2.



Figure A2-2: View of disturbed area within NAV community in the proposed building envelope of Lot 1.



Figure A2-3: Typical vegetation (coastal scrub on alkaline sands (SCA)) within the proposed building envelope of Lot 4.

Appendix 3: Land Capability definitions from Grose (1999)³

Prime agricultural land as described in the Protection of Agricultural Land Policy 2009:

CLASS 1: Land well suited to a wide range of intensive cropping and grazing activities. It occurs on flat land with deep, well drained soils, and in a climate that favours a wide variety of crops. While there are virtually no limitations to agricultural usage, reasonable management inputs need to be maintained to prevent degradation of the resource. Such inputs might include very minor soil conservation treatments, fertiliser inputs or occasional pasture phases. Class 1 land is highly productive and capable of being cropped eight to nine years out of ten in a rotation with pasture or equivalent without risk of damage to the soil resource or loss of production, during periods of average climatic conditions.

CLASS 2: Land suitable for a wide range of intensive cropping and grazing activities. Limitations to use are slight, and these can be readily overcome by management and minor conservation practices. However, the level of inputs is greater, and the variety and/or number of crops that can be grown is marginally more restricted, than for Class 1 land. This land is highly productive but there is an increased risk of damage to the soil resource or of yield loss. The land can be cropped five to eight years out of ten in a rotation with pasture or equivalent during 'normal' years, if reasonable management inputs are maintained.

CLASS 3: Land suitable for cropping and intensive grazing. Moderate levels of limitation restrict the choice of crops or reduce productivity in relation to Class 1 or Class 2 land. Soil conservation practices and sound management are needed to overcome the moderate limitations to cropping use. Land is moderately productive, requiring a higher level of inputs than Classes 1 and 2. Limitations either restrict the range of crops that can be grown or the risk of damage to the soil resource is such that cropping should be confined to three to five years out of ten in a rotation with pasture or equivalent during normal years.

Non-prime agricultural land as described in the Protection of Agricultural Land Policy 2009:

CLASS 4: Land primarily suitable for grazing but which may be used for occasional cropping. Severe limitations restrict the length of cropping phase and/or severely restrict the range of crops that could be grown. Major conservation treatments and/or careful management is required to minimise degradation. Cropping rotations should be restricted to one to two years out of ten in a rotation with pasture or equivalent, during 'normal' years to avoid damage to the soil resource. In some areas longer cropping phases may be possible but the versatility of the land is very limited. (NB some parts of Tasmania are currently able to crop more frequently on Class 4 land than suggested above. This is due to the climate being drier than 'normal'. However, there is a high risk of crop or soil damage if 'normal' conditions return.)

CLASS 5: This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal and occasional fodder crops may be possible. The land may have slight to moderate limitations for pastoral use. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices.

CLASS 6: Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use. This land should be retained under its natural vegetation cover.

CLASS 7: Land with very severe to extreme limitations which make it unsuitable for agricultural use.

³ Highlighted colour of Class corresponds with LIST Land Capability Class colours.

Appendix 4: Threatened Species Habitat

Table A4-1: Preferred habitat for threatened flora previously recorded within 5km of the subject title from NVA accessed 29/11/2021

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
<i>Acacia uncifolia</i>	Coast wirilda	Thought to be restricted to the Furneaux Group. It is usually found on soils derived from calcareous limestone in coastal heath, heathy scrub and dry open woodland, sometimes with emergent <i>Allocasuarina verticillata</i> (drooping sheoak). Occurrences on mainland Tasmania are assumed to have originated from ornamental plantings. A population on King Island is of uncertain status.
<i>Acrotriche cordata</i>	Coast groundberry	Associated with calcareous soils. It is found on broken, rocky ground and in heath, scrub and low forest. All occurrences are very near-coastal.
<i>Brachyscome perpusilla</i>	Tiny daisy	Found on rockplates and grassy herbfields, substrates including dolerite, sandstone and granite.
<i>Cotula vulgaris</i> var. <i>australasica</i>	Slender buttons	Habitat includes saline herbfields, rocky coastal outcrops, and wet or brackish swamps.
<i>Drosera glanduligera</i>	Scarlet sundew	Occurs in low nutrient, sandy or loamy soils in heathlands and woodlands in the north-east and on Flinders Island.
<i>Eucalyptus globulus</i> subsp. <i>pseudoglobulus</i>	Gippsland blue gum	Recorded from the far north of Flinders Island, Inner Sister Island and Rodondo Island. On the latter it occurs in <i>Melaleuca armillaris</i> forest with a damp understorey (ferns, etc.).
<i>Eutaxia microphylla</i>	Spiny bushpea	On Flinders Island, mainly occurs in windswept coastal heathland on calcarenite.
<i>Isopogon ceratophyllus</i>	Horny conebrush	Occurs on acidic sandy soils in dry heathlands in the Furneaux Group.
<i>Lasiopetalum baueri</i>	Slender velvetbush	Occurs in open, coastal shrubbery (usually low <i>Allocasuarina</i> forest) on dolerite along the north and north-east of the State.
<i>Leucopogon esquamatus</i>	Swamp beardheath	Occurs in sandy heathland and heathy woodland.

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
<i>Myoporum parvifolium</i>	Creeping boobialla	Restricted to Flinders Island where it is found in Gahnia sedgeland at Long Point and along the roadside fringing Allocasuarina (sheoak) forest near West End.
<i>Parietaria debilis</i>	Shade pellitory	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.
<i>Pomaderris intermedia</i>	Lemon dogwood	Occurs in heathland and heathy woodland on eastern Bass Strait islands but extends to mainly dry sclerophyll forest on mainland Tasmania, most often associated with rock outcrops (dolerite), riparian areas and open forest.
<i>Pomaderris paniculosa subsp. paralia</i>	Shining dogwood	Occurs in exposed sites along cliff lines and within dune and coastal heaths and scrubs, and low forest dominated by Allocasuarina verticillata (drooping sheoak).
<i>Pterostylis sanguinea</i>	Banded greenhood	Occurs in coastal eucalypt and sheoak woodland, teatree scrub and scrubby heathland on well-drained gravelly peat and sandy and clay loams.
<i>Scaevola albida</i>	Pale fanflower	The habitat includes near-coastal scrubs, woodlands and grasslands, usually on calcareous sands, and it has also been observed colonising road margins. The elevation of known sites is 10-30 m above sea level, and the annual rainfall is about 500-700 mm. The potential habitat of <i>Scaevola albida</i> on Flinders Island is roughly delineated by areas of Quaternary sands with limestone deposits, in the Marshall Bay land system. The analogous system in north-western Tasmania is the Temma land system.
<i>Spyridium parvifolium</i>	Dustymiller	Occurs in a range of vegetation types, mainly shrubby dry sclerophyll forests and woodlands. It can proliferate from soil-stored seed after disturbance.
<i>Triglochin minutissima</i>	Tiny arrowgrass	Inhabits fresh or brackish mudflats or margins of swamps in lowland, mostly coastal areas.
<i>Zygophyllum billardi</i>	Coast twinleaf	Known from calcareous sands, forests, wetlands and heath communities on the Furneaux Group.

Table A4-2: Preferred habitat for threatened fauna previously recorded within 5km or with range boundaries within 5km of the subject title from NVA and BVD accessed 23/11/2021

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
<i>Accipiter novaehollandiae</i>	Grey goshawk	Potential habitat for the grey goshawk is native forest with mature elements below 600 m altitude, particularly along watercourses. Significant habitat for the grey goshawk may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.). Forest types used; blackwood swamp forest, <i>Leptospermum</i> or <i>Melaleuca</i> swamp forest, riparian blackwood and tea-tree scrub communities, wet eucalypt forest with blackwood/myrtle understorey and rainforest.
<i>Antipodia chaostola</i>	Chaostola skipper	Potential habitat is dry forest and woodland supporting <i>Gahnia radula</i> (usually on sandstone and other sedimentary rock types) or <i>Gahnia microstachya</i> (usually on granite-based substrates).
<i>Aquila audax subsp. fleayi</i>	Tasmanian wedge-tailed eagle	Potential habitat for the wedge-tailed eagle comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Nests are usually not constructed close to sources of disturbance and nests close to disturbance are less productive. More than one nest may occur within a territory but only one is used for breeding in any one year. Breeding failure often promotes a change of nest in the next year. Significant habitat for the wedge-tailed eagle is all native forest and native non-forest vegetation within 500 m or 1 km line of sight of known nest sites (where the nest tree is still present).
<i>Galaxiella pusilla</i>	Eastern dwarf galaxis	Potential habitat for the dwarf galaxiid is slow flowing waters such as swamps, lagoons, drains or backwaters of streams, often with aquatic vegetation. It may also be found in temporary waters that dry up in summer for as long as 6-7 months, especially if burrowing crayfish burrows are present (although these will usually be connected to permanent water). Habitat may include forested swampy areas but does not include blackwood swamp forest. Juveniles congregate in groups at the water surface in pools free of vegetation. Significant habitat for the dwarf galaxiid is all potential habitat and a 30m streamside reserve within the core range.
<i>Heliaeetus leucogaster</i>	White-bellied sea eagle	Potential habitat for the white-bellied sea eagle species comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large farm dams. Scattered trees along riverbanks or pasture land may also be used. Significant habitat for the white-bellied sea eagle is all native forest and native non-forest vegetation within 500 m or 1 km line of sight of known nest sites (where nest tree still present).

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
<i>Limnodynastes peroni</i>	Striped marsh frog	Potential habitat for the striped marsh frog is natural and artificial coastal and near-coastal wetlands, lagoons, marshes, swamps and ponds (including dams), with permanent freshwater and abundant marginal, emergent and submerged aquatic vegetation. Significant habitat for the striped marsh frog is high quality potential habitat.
<i>Litoria raniformis</i>	Green and gold frog	Potential habitat for the green and gold frog is permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water holding sites such as old quarries, slow flowing stretches of streams and rivers and drainage features.
<i>Pardalotus quadragintus</i>	Forty-spotted pardalote	Potential habitat for the 40-spotted pardalote is any forest and woodland supporting <i>Eucalyptus viminalis</i> (white gum) where the canopy cover of <i>E. viminalis</i> is greater than or equal to 10% or where <i>E. viminalis</i> occurs as a localised canopy dominant or co-dominant in patches exceeding 0.25 ha.
<i>Prototroctes maraena</i>	Australian grayling	All streams and rivers in their lower to middle reaches. Areas above permanent barriers that prevent fish migration are not potential habitat.
<i>Pseudemoia pagenstecheri</i>	Tussock skink	Potential habitat for the tussock skink is grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.
<i>Pseudomys novaehollandiae</i>	New Holland mouse	Potential habitat is heathlands (mainly dry heathlands but also where dry heathlands form a mosaic with other heathland, moorland and scrub complexes), heathy woodlands (i.e. eucalypt canopy cover 5-20%), <i>Allocasuarina</i> -dominated forests on sandy substrates (not dolerite or basalt), and vegetated sand dunes. Key indicator plant species include (but are not restricted to) <i>Aotus ericoides</i> , <i>Lepidosperma concavum</i> , <i>Hypolaena fastigiata</i> and <i>Xanthorrhoea</i> spp. Significant habitat for the New Holland mouse is all potential habitat within the core range of the species.

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